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# Gleanings in Bee Culture

VOL. XXXVIII

OCTOBER 15, 1910

NO. 20

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# Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees, to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

## Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

## How these Moving Pictures were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee-keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb-honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

**Irving Kenyon, one of Mr. House's pupils**, will also show a scheme for screening a honey-house; how to open the screen door when the hands and arms are loaded down with supers or hives.

**M. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M.**, will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee-matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

## Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet-clover seed, *Melilotus indica*, post-paid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires**.

To encourage old subscribers to secure new ones we will send a one-pound package post-paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

## Yellow Sweet Clover (*Melilotus Indica*). What is It?

This we believe is a very remarkable honey-plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload**. The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis*, and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

## Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

**THE A. I. ROOT CO., Medina, Ohio.**



# Gleanings in Bee Culture

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## Editorial

ALL about the "Everglades," from a bee-keeper who lives there, in next issue, which will be a "Florida special."

DON'T forget to read the special subscription offer on first page of our advertising section, by which the reader can get one-half pound of yellow-sweet-clover seed free.

### SOME MORE EXTENSIVE ENLARGEMENTS.

SOME extensive enlargements have been going on in the way of buildings and equipments at The A. I. Root Company's plant. Any bee-keeper who would like to see how we have grown during the last few years is invited to make us a visit. But be sure to come to the office, tell who you are, and ask for a pass.

### MODEL FOUL-BROOD LAW.

WE shall be glad to furnish copies of a model foul-brood law to any who may apply. The one to which we refer was drafted by Dr. E. F. Phillips, of the Bureau of Entomology, Washington, D. C. For most States we believe it will prove to be the most effective that has been proposed or enacted. We have it in Ohio, and it works as well in practice as in theory.

### BEES AS FERTILIZERS OF CRANBERRY BLOSSOMS.

MORE and more the value of bees as fertilizers of blossoms is being understood. We notice in *The Boston Transcript* that Prof. H. J. Franklin, who has charge of the cranberry experiment station at Wareham, Mass., states that the bees have an essential duty to perform in cranberry work, and that the fertility of the cranberry-bogs depends on the presence of the bees. An experiment was tried, consisting of screening a portion of the bog to keep the bees away, with the result that there were few berries in the screened portion, while in the outside there was a fair crop. Further experimenting will be done next year.

### HONEY-MARKET CONDITIONS.

PRICES probably have reached their height. We are getting too close to the hol-

idays to warrant buyers laying in a very large stock now. Of course the general scarcity of comb honey may have a tendency to keep prices up, but it will be very risky for those who have honey for sale, especially comb, to hold any longer, expecting a further advance. Extracted can be held over, because it will keep for another year, but comb honey should always be sold as early in the fall as possible.

There does not seem to be very much difficulty in getting good extracted, but good *comb* honey has been rather scarce; and this very scarcity, as we have already stated, may have a tendency to hold prices up.

### TWO NEW BEE-BOOKS IN THE PRESS OF GLEANINGS IN BEE CULTURE.

THE copy for a new and revised edition of *Advanced Bee Culture*, by W. Z. Hutchinson, is now in the hands of the publishers of this journal. We hope to have the new edition ready for delivery along about the holidays. The new book will be considerably enlarged, and brought clear up to date. The fact that W. Z. Hutchinson is the author of it is enough to show any practical bee-keeper that it is a work well worth reading. While it is designed primarily for the advanced bee-keeper, as its name indicates, the beginner, if he has in connection some other work, will find it exceedingly valuable. We also have in hand the copy for a book for beginners, by E. D. Townsend. *Advanced Bee Culture* and Townsend's book would go well together. We hope to have the former ready for delivery in about a month.

### FEEDING LATE.

LOOK well to your colonies to see if they have sufficient stores to carry them through the winter. Strong colonies especially need an abundance of stores. For *outdoor* wintering we would have not less than 20 lbs., and, better, 25 lbs. of sealed stores to a strong colony in a ten-frame hive. Weaker colonies will, of course, get along with proportionately less. For indoor wintering we usually figure on having about from one-half to two-thirds the amount that we give to outdoor bees.

If you find colonies short of stores, the best thing to do is to give them combs of sealed honey. If these are not to be had, feed sugar syrup made out of cane sugar, two parts sugar to one part of water by bulk.

If the weather is cool, feed the syrup moderately hot.

One yard last winter, where we had almost perfect wintering, we fed so late that we had to wear overcoats and mittens to give the syrup to the bees. We do not advise late feeding; but if it has been deferred, through inadvertence or inability to get at the work sooner, feed anyhow. Don't let bees go into winter quarters short of stores.

#### THE IMPORTANCE OF SHIPPING COMB HONEY IN UP-TO-DATE PACKAGES.

VERY recently we have seen several lots of honey, otherwise first class, that arrived at destination in very bad order because the shipper evidently thought he could not afford to take a bee-paper or a bee-book, or because he does not take the time to read them. No wonder some dealers will refuse to take consignments of comb honey. We saw one shipment of four cases of nice comb honey put into a *common box*. Of course, the honey went through all broken down. If only one or two cases go, they should be properly marked "Comb Honey" or "Fragile, Handle with Care." Labels for that purpose can be had of any of the dealers. When ten to a dozen cases are sent, they should be put in a carrier provided with handles. The bottom of the carrier should have four or five inches of straw before putting in the cases.

We have seen lots of honey recently that brought a low price simply because they were put in poor, home-made, cobbled-up shipping-cases. When will some people learn that, in order to get good prices, they must put their produce up in first-class packages?

#### BEEES MAKING TROUBLE IN CANDY-FACTORIES.

A NUMBER of our subscribers have written us regarding a wholesale destruction of bees by employees of candy-factories in the southern part of Ohio. There are no screens on the windows; and when the bees collect inside a long gas-hose is made use of, with a burner on the end, which is rapidly run over the windows, and the wings of the bees burned off. They then drop to the floor where they are swept up into buckets and carried out and killed. This is an aggravating case, for very likely if the bee-keepers took the matter into court the candy-factories would turn about and make an effort to declare the bees a nuisance. They probably would not succeed in doing this, but they would make the bee-keepers a lot of trouble.

It is a shame that candy-factories should be allowed to operate without screens on the windows, for there is then nothing to prevent the flies from the street coming in, laden with disease germs as they are, and reveling on the exposed sweets. Possibly some of the candy that we eat would not taste as good if we could see how it was made.

We have been advising the bee-keepers who are losing bees in this way to take up the matter with the manufacturers of candy in a friendly way, and see if they can not be induced to put screens on the windows. Perhaps the pure-food law might help them out, but we doubt it somewhat. Unless the factories are so extensive that there are a large number of windows to be screened, it would seem to us that the bee-keepers living near could well afford to bear a part or all of the expense of the screens that would be needed.

#### TREATING FOUL BROOD LATE IN THE FALL OR IN THE WINTER.

WE are getting quite a number of inquiries, asking how to treat foul brood after brood-rearing has practically ceased and the colonies are preparing to go into their long winter sleep. As a general thing the presence of disease in such colonies can not be detected except by foul-brood scales. In a case of the American type of disease a sort of gluey mass that was once a larva will be found lying in the bottom of the cell, dried down and stuck fast. As a general thing nobody but an expert will be able to recognize these so-called scales. On the other hand a bee-keeper will occasionally find a little brood in his hives that is unmistakably foul.

In either case he wishes to know what to do. At this time of the year we would recommend cutting out the portion of the brood or comb known to be diseased. If a comb contains foul-brood scales, remove it, or any others that show the characteristic scales. In all probability the removal of the affected combs or affected portion of the combs will result in the cure for next spring. It is quite impracticable to shake on foundation at this time of the year. If the colony was very badly diseased, known to be such in early fall, and for some reason treatment was deferred, we would recommend shaking the colony, if a strong one, on foundation; let it stay there for 24 hours, remove the foundation, and then give good combs of sealed stores from a healthy colony.

If European foul brood is known to exist or is suspected we would advise changing the queen, but no other treatment. Of course, when requeening, the very best of Italian stock should be procured. This requeening may be sufficient, and it may not. Either disease would be practically inert during the late fall and winter; but all colonies where the disease is suspected in the fall should be examined repeatedly next spring. If disease develops, treat in the regular way.

#### SOME TRICKS OF THE TRADE IN UNITING.

Now is the best time of the year to do general uniting for winter. A morning should be selected when it is cool, or cold, when the bees are not flying, say a temperature of 50 or 60 degrees. If the two colonies to be united are contiguous, that is, stand side by side, remove one of the hives



and put the other one half way between the places where the others stood. Then pick out the best frames of the two brood-nests with the bees and put them into the one. As a matter of precaution, don't mix the combs of the two lots, but put one set on one side and one set on the other side of the brood-nest. Close the hive up. If there is no difference, pay no attention to the queens. If one queen is superior to the other, kill the inferior one and allow the other to remain. It is not very difficult to introduce a queen out of the same yard—in fact, any fresh queen that has not had a long journey through the mails. In most cases the queen of one lot of bees will be accepted by the bees of the other set of combs.

But in a case where the two weak colonies are separated, one in one portion of the yard and the other in another, we would advise moving the weaker of the two, which has been made queenless, over to the stronger, and, while doing so, blow a little smoke into the entrance and jar the bees, giving them a general jouncing before uniting the two sets of combs into the one brood-nest. The other colony, or the one to receive the others, should be disturbed or smoked at the entrance. This is done to get the bees to fill up with honey. This work should be done in the cool of the morning or the cool of the evening, when no bees are flying; and don't forget to jar the bees that are moved, and make them queenless two or three days in advance.

In the case of hybrids or blacks it may be necessary to use a little smoke after uniting, to keep them from fighting. A better way in the case of bad bees like Cyprians, in addition to smoking, is to sprinkle both lots with sweetened water. This will cause them to lick each other off; and during the process they will acquire the same scent.

It sometimes happens that one will have a lot of weak nuclei in the yard. It may take a dozen of them to make one good colony. We would advise shaking the bees of these, if queenless, all into a wire-cloth box until you have something like five or six quarts of bees. Give them a general jouncing; then in the cool of the morning, or, better, in the cool of the evening, take up a dipperful of bees and dump them in front of the entrance of any colonies that may need a little strengthening. If one colony requires two dipperfuls, give it the amount required, and so on scatter the bees among the hives that can stand or need a few more bees. There will be no trouble, if in the cool of the morning or evening, about these bees uniting or about their attacking the queen.

Do not make the mistake of trying to unite when the bees are flying. After they once get out in the air, when they find their hive gone, they will, of course, go back to the old stand. Remember to do all the uniting in a cool atmosphere. Very few bees will return to the old stand, if, during the move from the old stand to the new, the hive is pretty well bumped around. Right

here score a point in favor of Hoffman frames or any good self-spacing frames.

If one does not have Hoffman frames, let him shake the bees off in front of the entrance of the other hive—that is, the hive that is to receive the two lots of bees, and allow them to run in. The point is, that, in order to make bees stay in the new location, they should be “shook up” or disturbed. Right here the principle of “shook” swarming, that has been advocated so much of late, comes in, for shook swarming is nothing more nor less than natural swarming induced artificially.

For some of these tricks of the trade we are indebted to our apiarist, Mr. J. W. Bain. In this connection Mr. Bain says there is no use in trying to unite *old* bees, as they probably won't stay. Moreover, he says they would be of no use to any colony, as they would only be consumers, and would die off long before spring. This dovetails very nicely with the teachings of the late Henry Alley.

#### PREVENTING THE BEES FROM RETURNING TO THE OLD STAND WHEN COLONIES ARE MOVED SHORT DISTANCES IN THE SAME YARD.

In the fall of the year it is sometimes advisable to change the position of some of the hives, which, from the experience of the winter before, are found to be too much exposed to the wind; or, occasionally, the owner wishes to move the hives close together for the purpose of packing under a temporary shed, etc. There is often considerable loss when this is done, owing to the fact that the bees return in large numbers to the old stand; and, even though there be no hive there, they collect in bunches, and finally perish or wander all around, only to get lost. This loss may be partially prevented, if not wholly; but the moving must be done in the right way.

Very early in the morning of a warm fall day, before the bees have started to fly, is an ideal time for this work. Simply give the bees of the colony that is to be moved a good smoking at the entrance to keep them in while the hive is being carried, and then move the hive to its new position. When all are moved, and just before the bees would ordinarily start flying, blow in considerable smoke at the entrance of each hive moved, and pound vigorously on the sides with a stick. This will cause the bees to fill up; and when they come out to fly they will mark their location so that few return to the place previously occupied.

If there are too many to move before the bees would be flying in the morning, some may be moved the night before; but all moved colonies must be vigorously smoked and roughly handled by means of pounding, etc., just before they go out to fly. It is much better to do all the moving at one time, however. We recently shifted about twenty colonies in chaff hives to a new location in the same yard, and, by following this plan, had no loss.

## Stray Straws

By DR. C. C. MILLER, Marengo, Ill.

A COLONY on scales weighed 2 lbs. 5 oz. less after its cleansing flight than before it. If I understand it, this did not include weight of dead bees.—*Deutsche Imker*, 274.

POLLEN in a queen-cell is a sign of queenlessness; but I supposed it was only in advanced stages. The other day I found pollen in five queen-cells in a strong colony queenless only two days.

HEARTSEASE was formerly not worth considering here as a honey-plant, because of its scarcity; but of late years it has become plentier, and this year it is worth many a dollar. Same with dandelion.

WM. McEVOY is asked, *Canadian Bee Journal*, p. 242, "Can combs that have had foul-brood matter in them be made safe to use again?" He replies, "No, positively no." Likely that refers to American foul brood.

ERNEST THOMPSON SETON says, *Ladies' Home Journal*, p. 6, "Queens of the honey-bees live one or two years, but some have been kept alive for five years." That's a bit off according to my books. For every one superseded at one year, five live to be three.

DR. BRUENNICH, *Schweiz. Bztg.*, p. 352, gives a frame-spacer that will appeal to extracting men. Simple and effective while in the hive, when put in the extractor the spacer is quickly turned out of the way on a sort of hinge, and then it's just the same as if no spacer were present—not expensive, either.

HOW THICK is worker comb? "An inch thick," says one. "Never more than  $\frac{3}{4}$ ," says another. Neither correct. I suppose it is about  $\frac{3}{4}$  thick the first time brood is reared in it, and each set of brood increases the thickness of the septum, and so the thickness of the comb, until it is an inch thick or thicker.

PERCOLATION with the Miller feeder is the easiest thing possible. Many a bag of sugar I fed in this way. First I went around and put a feeder on each hive, leaving it uncovered. Then I put sugar in each feeder, leaving it uncovered. Dry sugar will not start robbing. Then I went around to each feeder, poured in cold water, and covered up.

W. S. ADKINS, if I had that long queenless hive of yours, p. 598, and didn't break it up, here's what I would do: Exchange three of its combs for three combs with queen and adhering bees of another colony; put these in an upper story over the long queenless colony with newspaper between the two stories, and a few days later put them down in the hive. Introduce a queen to the other colony.

I'VE STOOD it long enough to be in ignorance, and now I want to know if Oliver Foster and Wesley are related. If so, neither one need be ashamed of his relative. [Wesley speaks of Oliver as "my father."—Ed.]

DR. A. F. BONNEY, p. 586, a box-hive may be thoroughly propolized inside; but my oldest movable-frame hives are far from being water-proof inside. I grant you that painted hives are more beautiful; and if my hives were much seen I would paint them; but the cost of painting put into flowers appeals a good deal more strongly to my "bump of beauty-love."

DR. MASSEN threw colonies upon foundation that was made of wax from colonies badly infected with foul brood. In every case the colonies on this foundation remained healthy.—*Deutsche Imker*, 269. [Different bee-keepers in this country have tried the same experiment with precisely the same result. We do not think there is a particle of danger of transmitting disease through foundation as it is usually made, especially when it is made in a regular foundation-factory.—Ed.]

D. M. MACDONALD, *British Bee Journal*, p. 304, says that "bees like new combs best when the active season opens," and he rather conveys the idea that they prefer foundation to old combs. I wonder what is really the *whole* truth about that. I have known what seemed to be a preference for foundation or new combs, but nearly always my bees show a marked preference for old combs, the blacker the better. A good many times I have known the queen, in extending the brood-nest, to jump over a frame of foundation, or a drawn comb never bred in to occupy an old comb beyond. I read this over to my assistant, and she said, "Yes, this summer I saw a case where she jumped over two such frames in the center of the hive."

I. HOPKINS, you say, page 618, that Ohio foul-brood law has the fatal defect of *all* our foul-brood acts. Colorado has the same law as Canada, allowing the inspector to compel transference from box into frame hives. [We ought to have mentioned, on page 618, in a footnote, that the conditions in America are far different from those in Great Britain. If we are correct, the cottagers of old England, as a general rule, do not use the modern frame hive, while in this country the box hive or any hive that does not have movable combs is getting to be the rare exception. There is, therefore, not the same need of having a law that makes the use of movable frames compulsory. Our Ohio law we consider quite adequate, therefore, because the inspector always has the power to order treatment for colonies, whether in box hives, straw skeps, or what not; and it is up to the bee-keeper himself to transfer unmovable combs, because that is the only way he can ever eradicate American foul brood, at least. European foul brood could be handled by the dequeening process, possibly.—Ed.]



## *Bee-keeping in the Southwest*

By LOUIS SCHOLL, New Braunfels, Texas

### SCHOLL'S METHOD OF REMOVING HONEY.

For years we have not owned a bee-brush of any kind, removing tons of honey without brushing a single comb. We feel that this is the most practical way, and a time-saver as well as a money-saver. While visiting one of our progressive bee-keepers in Southwest Texas, Mr. Louis Biediger, at Atascosa, we had occasion to show him the advantages of our way of removing the honey, and he recently wrote us as follows in regard to it:

I wish to thank you for the valuable hints which I learned from you during your recent visits at my home. I have tried your way of taking off honey, on five separate occasions, and I must say that I do not brush the bees off the combs any more. Although I can probably not work this "super-jerking" quite as fast as you can, still I can do it fast enough to have the honey on the wagon and out of the way before the bees start to robbing, and this is something I never could do when taking off honey the old way or even by the Coggschall fashion.

Our way is simply to use shallow ideal supers throughout, as we have advocated for years; and when these are filled it is an easy matter to smoke the bees down, or most of them, and then shake out the rest while the supers are rapidly handled and brought to the wagon. They are then loaded and covered up bee-tight to prevent robbing. We begin with one hive, taking off the cover quickly with the left hand, then blowing in smoke to run the bees down. In the meanwhile, with the left hand we remove the cover from the next hive, each time throwing it in front of its respective hive, so that the bees can crawl back. Smoke is then blown into the second hive while the cover of the third hive is taken off, and so on until five hives standing in a group are all open, and the bees sent scrambling below out of the way. Then we return quickly to the first hive, give it a few more puffs of smoke, then the second, and so on, until all have had the second smoking. When this is done, the supers are ready to be jerked off and leaned against the front of the hives at one side so the rest of the bees may crawl out.

The next or second round of supers is even more quickly removed, since the bees in them are already scrambling downward from the smoking received from the first supers removed. We can remove honey faster this way than by any other plan, not excepting the bee-escape method, since we can take the honey off in about the same time that bee-escapes could be put on. Then, besides, bee-escapes are out of the question at outyards many of which are over twenty miles away. In the time that would be required by an extra trip to put on escape-boards, we take off the honey and get started home with it before the bees are hardly aware of what has happened.

### WHAT KIND OF PAINT TO USE ON BEE-HIVES.

We have always been a firm advocate of painting hives, as the readers know. Others have been writing on the subject, and several have mentioned the kind of paint to use. On page 576 the editor endorses the use of pure lead and oil only, in preference to lead and zinc paint, claiming that, because the lead-and-oil paint without zinc does not become hard and firm, it chalks off readily so that the surface can be repainted to look as good as new, whereas lead-and-zinc paint flakes off in scales, leaving a rough surface to be repainted.

Although this is true, we do not like the lead and oil without zinc, just for the reasons mentioned. It does not hold on well enough, and it chalks off so quickly that it must soon be repainted. If zinc be added, the paint has a harder surface, holds on better and longer, hence is more durable and satisfactory, beside being less expensive. It is true that, if too much zinc is used, the paint before long peels off; but this is a mistake, for the zinc should be used only in the right proportion to give good results. We have tried all kinds of paint, and applied it in many different ways; but the best results that we have obtained have been with a good well-mixed lead, zinc, and oil paint. The best way of applying this to give the most satisfactory results is to have the first coat thin, spread on well, and not too thick. This should be on at least six months or a year before the second coat is applied. After waiting this long, two more good coats are given, and for durability we know of no better method of procedure.



### BEE-STINGS AND RHEUMATISM.

This is an old worn-out subject with some; but to others it is entirely new. I am still of the opinion that there are two sides to this much-discussed question. This is brought out by some of my own experience in the first place, and by that of others in the second. Then when some of our best physicians tell me that "it seems reasonable enough that there may be something in it," although they have not made an application themselves, we begin to wonder where we are at. Right in this line our family physician gave me the following clipping as coming from an authority:

Maberly reports several cases of chronic (apparently intractable) cases of rheumatism which were cured to all intents and purposes by being exposed to bee-stings at regular intervals. One, a man about 35 years of age, had been laid up three times with rheumatic fever for six or seven months each time, and found his joints increasingly stiff with each attack. In his case the stings did marvels. His feet had always been stiff from the first attack, but now he could walk anywhere, and "did" about twenty miles every Sunday. His ankle movements were perfect, and he stood on his toes quite easily. He says that he always ate and drank what he liked, and whenever he could catch a bee in his garden he did so and put it on. Maberly saw a number of other cases, some of old-standing chronic rheumatism, both in elderly and younger subjects, and all were doing well; while, in nearly all, the usual remedies had been tried without any good results.—*Am. Med. Ass'n Journal*, Aug. 20, 1910.

## *Conversations with Doolittle*

At Borodino

### WHEN TO SET BEES IN THE CELLAR.

"I have built a new cellar especially for the bees, therefore have come to ask you when it is best to put the bees in it."

"I have set my bees in the cellar as late as December 25 and as early as November 3."

"There is quite a range between those dates. A bee-keeper who winters in the cellar told me yesterday that he thought the fore part of December was about right."

"I used to think the same, being very anxious to give the bees an opportunity for the latest possible flight, so that they could the better stand their long confinement; but after reading several articles on the subject I resolved to experiment a little; so on November 3 I set a part of my colonies in the cellar, probably about one-third of all I had. As I remember, these bees had not flown after about October 20, and I feared they would not come out well."

"But was not the weather so warm that they bothered by flying out badly while being carried into the cellar?"

"That was where I learned something. The mercury was up to nearly 48 degrees, where bees would fly nicely in the spring of the year, and I expected trouble in getting them in, on account of the necessary disturbance. However, much to my surprise none offered to fly, and were very much less disturbed than any I had ever cellared before. And what pleased me was this: The hives, bottom-boards, etc., were dry and nice, instead of being wet or covered with snow or ice, as was frequently the case where I had left them out till into December."

"On November 11 those left out had a fine flight—as good as I ever knew bees to have in the fall; so on the 12th I set in another third, leaving the rest out for a still later flight. These also went in dry and nice, with little disturbance when setting in. The last third was left out till the fore part of December, or the usual time of setting in. There had been rains and snows, with much freezing weather; and as there seemed no prospect of further flight I thought best to set them in before the hives were entirely covered with snow. The hives were now frozen down, so that, in prying them up, there was quite a cracking and consequent jarring, which disturbed the bees so that they came out all over the fronts of the hives, after they were in the cellar, and many flew out on the way. I then learned that bees could be set in the cellar with much less disturbance when the weather was about as warm outside as inside the cellar, and all of my experience since has told me that any time after October, when every thing is dry and nice, with

the mercury at from 40 to 50, it is time to hustle the bees in.

"As I had no provisions otherwise, of course those set in the cellar last had to be set out first. Again, I found them easily disturbed when setting out, showing that they had hardly quieted down in all winter, or else remembered their experience of the fall previous. When all were out, there seemed little difference as to their average strength, although, if any, it was in favor of the first set in. Later on, however, those last set in and first out suffered quite a bit from spring dwindling, thus proving that they had not been as quiet as the others during the winter."

"But what about those set in before the good flight, and those immediately afterward?"

"Between the first and second lot set in I could see no difference, this proving that a late fall flight was not quite as necessary as I had always supposed. I believe that there is nothing gained by leaving colonies out later than the fore part of November, providing all is in readiness for their being put in, other than their having a very late flight. On the contrary, by leaving them out beyond a prospect of getting them in all dry and nice, generally resulting in a day when the hives are frozen down, we are inviting poor wintering. All concede that bees will not winter as well with the inside of the hive covered with frost, which melts as soon as placed in the cellar, thus causing every thing inside of the hive to be damp, even if the hive is not soaked to quite an extent from wet weather, which is more likely than the other way with late cellaring."

"But tell me something about the cellar—the right temperature to be maintained, etc."

"The character of the cellar has much to do with successful wintering. Unless an even temperature, or as nearly as possible between 40 and 48 degrees, staying the larger part of the time between 43 and 45, I should prefer to have the bees left in good chaff-packed hives on their summer stands."

"But will not the warmth of the bees keep the temperature of the cellar about where it should be?"

"Not by any means. If that were so, a room above ground would be all right. The worst wintering I have ever known has been in rooms partly above ground, such as a basement under a shed or barn, one in which the mercury would go down a little below freezing, and stay there most of the time. No, the cellar should stay between 40 and 48 whether there are bees in it or not, to be of the best service in wintering bees. Where it takes the bees to keep the temperature up in very cold weather, it will be very much too warm in mild spells during winter, and especially so in early spring before it is time to set them out. And, besides, the bees must 'burn' a much larger quantity of honey to keep up the needed temperature when the cellar is cold, even could they do this."



## General Correspondence

### EUROPEAN FOUL BROOD.

**How Dr. Miller Succeeded in Treating European  
Foul Brood by Both the Alexander and  
the McEvoy Plan.**

BY DR. C. C. MILLER.

[After we visited Mr. S. D. House, and learned of his experience in treating European foul brood by the Alexander plan, as related on page 611 editorially, in our issue for Oct. 1, we had a curiosity to know how Dr. Miller was coming on, and we accordingly wrote him, asking him to give us his final conclusions. We suggested at the time that if he would get rid of his sprinkling of black blood the problem would be much simpler for him. The following is the article which he sends in reply.—Ed.]

At the close of last year I went into winter quarters with the expectation—indeed, rather with the desire—that I might have cases of European foul brood to deal with this year, so that I might learn more about the disease. I was not disappointed. The disease appeared in greater or less degree in 27 hives. It appeared in those that had been treated by the modified Alexander treatment, and also in those that had been brushed upon foundation. How much of it came from outside apiaries there is no way of telling; but I suspect I would have had enough to fool with if there had not been any surrounding apiaries.

There was no very bad case. Indeed, in 11 of the cases there were so few bad cells that I did not think it worth while to meddle, and the bees cleaned up of their own accord. Last year my chief effort was to get rid of the disease. This year I didn't care for that so much as to learn more about it, so my efforts were more or less experimental. Last year, by a mere blunder, I departed from the Alexander method to the extent of giving the diseased colony a virgin queen ten days sooner than the regular Alexander recipe called for. As that had succeeded, my chief effort this year was to see whether another ten days might not be cut out. So in most cases I destroyed or removed the queen, and at the same time gave to the colony a virgin. That would generally leave the colony eight or ten days without a laying queen. In several cases the virgin failed, and a second virgin was given, which increased the time of queenlessness; but I did not see any difference in results; and, so far as I now see, just as good results can be had from this shortened treatment as by giving the full Alexander time.

There can be no question that *if* just as good results can be had by giving a virgin immediately upon the removal of the queen instead of waiting the regulation twenty days, there will be a great gain. I think I hear some one say, "You do well to put in that 'if.' Now, why not wait till you have

tried the matter more fully, instead of rushing into print with your half-baked ideas and dreams?" True enough; that would be a good way. But, in the meantime, if I tell about what I have tried, some one else may help to try the matter more fully. Besides, it would have been worth many a dollar to me if, before I had melted up good combs by the hundred last year, some one had told me that he had made even a partial success by giving a virgin immediately upon the removal of the queen.

And right here I want again to record my thanks to the editor of GLEANINGS, who insisted that I should give a trial to the Alexander treatment, which I did only after having treated most cases by the McEvoy plan. If it had not been for trying to please him, I doubt if I would have tried unqueening at all.

No. 67 was a weakling, of three brood or less, that had bad brood. It went queenless of its own accord, and reared a young queen, but remained diseased. That confirmed, if such a thing needed confirmation, what Mr. Alexander had insisted upon, that a colony must be strong to overcome the disease.

No. 12 and No. 14 were diseased, neither of them strong. I caged the queen of No. 14, took the hive from its stand, put in its place an empty hive in which were clean combs and a frame of brood from a healthy colony; and in this hive I put the caged queen. The object of caging the queen was merely to keep her in the hive until she would have enough company to hold her there. Understand, there was not a bee in the hive except the caged queen; but immediately the field bees began to return to the hive; and as soon as a few had returned I liberated the queen. The colony was very weak, but when brood appeared it was all perfectly clean. Later on, however, there was some bad brood. Did it come from outside? It hardly seems possible that it could have come from inside, for there were no workers in the hive except such as returned to the hive from the field, and it is generally understood that a bee going from a diseased colony to the field carries no disease with it, for on this depends wholly the success of the Baldrige plan. Anyhow, if those bees brought the disease it should have shown in the first brood.

The brood and bees taken from No. 14 were given to No. 12, whose queen had been killed four days previously. The next day a virgin was given, and in due time she began laying. Forty days after the killing of the old queen, No. 12 was found clean; but two weeks later still, some bad brood was present. Was that bad brood imported, or was it a home product? I'd give something to know.

In spite of the final apparent failure of Nos. 12 and 14, I think the plan is worth further trial, for it is entirely possible that each of them got the disease finally from the outside. But if I were trying the same thing over again I would kill the queen of No. 12



on the same day as giving the virgin and the bees and brood from the other colony.

In general I have much faith in this treatment: Make the diseased colony strong by adding brood or *young* bees; kill the queen; give a virgin or a queen-cell, and then trust the bees to do the rest. I know that cuts twenty days off the regular Alexander treatment, but I believe it will work, because it did work in nearly all—and I *think* in all—the cases in which it was fairly tried.

Marengo, Ill.

[As the Alexander plan has been spoken of considerably of late it seems pertinent to republish it just as Mr. Alexander gave it to our readers in 1905, after he had cured his entire apiary of 700 colonies without so much as destroying a comb, and here it is:

This cure is on the line of introducing new blood into the apiary, which will necessitate getting a choice Italian breeding-queen, one of the best honey-gathering strains that can be procured. For this special purpose I prefer quite yellow Italians. Now for the cure.

Go to every diseased colony you have and build it up either by giving frames of maturing brood or uniting two or more until you have them fairly strong. After this, go over every one and remove the queen; then in nine days go over them again, and be sure to destroy every maturing queen-cell, or virgin if any have hatched. Then go to your breeding-queen and take enough of her newly hatched larvae to rear enough queen-cells from to supply each one of your diseased queenless colonies with a ripe queen-cell or virgin just hatched. These are to be introduced to your diseased colonies on the twentieth day after you have removed their old queen, and *not one hour sooner*, for upon this very point your whole success depends; for your young queen must not commence to lay until three or four days after the last of the old brood is hatched, or 27 days from the time you remove the old queen. If you are very careful about this matter of time between the last of the old brood hatching and the young queen commencing to lay, you will find the bees will clean out their breeding-combs for this young queen so that she will fill them with as fine healthy brood as a hive ever contained. This I have seen in several hundred hives, and have never seen a cell of the disease in a hive after being treated as above described.

It is not necessary to remove any of the combs or honey from the diseased colony; neither is it necessary to disinfect any thing about the hive. Simply remove the old queen, and be sure the young queen does not commence to lay until three or four days after the old brood is all hatched. This treatment with young Italian queens is a perfect cure for black or European foul brood.

In regard to those old queens that were formerly in your old hives, I think it best to kill them when you first take them from their colonies—not that the queen is responsible for the disease, for I am sure she is not; but a young Italian queen that has been reared from a choice honey-gathering strain is worth so much more to you that I can not advise saving these old queens.

I have experimented along this line considerably, and found, after the colony has been without a queen 27 days, as above directed, it will usually be safe to give them one of these old queens, and the cure will be the same. Still, there have been exceptions, so I advise killing them at once.

Now a few words about your breeding-queen. Buy one of the very best you can for this purpose; for upon her real merits rests the true value of your apiary hereafter. I would buy a three-comb nucleus with this valuable queen, so as to run no risk in introducing her to a full colony.

Apparently Dr. Miller has been very largely successful, even with his old strain of hybrids; but we presume he would be much more successful if he would eliminate his black blood, which, apparently, he pro-

poses to do. It would be a great thing if we could save the old combs from colonies affected with European (black) foul brood. At other times we could readily see it would be more profitable to apply the shake-out or what is generally called the McEvoy plan.

We are beginning to feel (we can't arrive at a positive conclusion yet) that European foul brood in the hands of intelligent bee-keepers who use exclusively Italian blood of vigorous stock need not make very much headway if any at all. If E. W. Alexander originally, and later Mr. S. D. House and Mr. Irving Kenyon, have no trouble from the disease when the neighbors have it all around them, we may reasonably suppose that others can enjoy the same immunity providing they introduce Italian blood and follow either the McEvoy or the Alexander treatment according to conditions. American foul brood, on the other hand, will continue to have its terrors, even to the up-to-date bee-keeper; for this disease does not, apparently, yield so readily to treatment as the European type.—ED.]

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### ADVERTISING HONEY.

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**How to Get it Before the Public in the Most Forceful Manner.**

BY E. G. HAND.

That article on advertising honey, page 558, Sept. 1, brings up a phase of the honey business that is entirely too much neglected. As one who for ten years has been in the bee-keeping and honey business, and who, during the same time, has been a student of the science of advertising, I have many times wondered that the advertising of honey has been so almost (in fact, I might safely say practically *entirely*) neglected.

Here and there one may see, occasionally, in a local paper, the announcement by a merchant that he has received a consignment of honey, and now and then the big city stores mention it casually among their wares; but as for any organized or earnest effort on the part of the honey-producers, either collectively or individually, to bring their product to the attention of the public through the medium of the press, I have yet to see the first instance of it.

Why is it that the various concoctions masquerading under the name of "corn syrup" have such an enormous sale? Read the papers and magazines, and you will quickly find out; for you will see their names and illustrations staring you in the face everywhere you turn, while it is rather the exception than the rule to see the word "honey" in print. As a consequence, the average bee-keeper is probably more familiar with the alleged merits of these products and their ilk than he is with the real merits of his own stock in trade. The same may be said of the hundred and one cereal preparations which have invaded the market with-

in the past ten years, and which now are to be found regularly on most tables.

This should not be. The honey industry is big enough and rich enough to invest a few thousand dollars a year in a publicity campaign, which, if properly conducted, would produce results beyond the imaginings of any one who has never advertised in the present-day sense of the word.

It might be argued that the profits in the honey business would not stand for an expensive advertising campaign. The man who raises this objection, however, is simply mistaking cause for effect. It would be a very short time, under a scientifically conducted system of publicity, until the demand for honey—real honey, bearing the brand of purity advertised, whatever that might be—would be such as to advance the price to a figure which would pay the cost of the advertising a dozen times over.

Local advertising by individual bee-keepers is as sadly neglected as is general advertising by the fraternity at large, as represented by the national and local associations. My own experience has been, however, that it can be made productive of just as great results locally as the other scheme would produce nationally; but, like the larger campaign, it must be properly and intelligently conducted. A "standing" advertisement, as suggested in the article referred to at the beginning of this one, is perhaps better than none; but little more can be said in its favor. It will catch the person who is out looking for honey—the person who would most likely eventually find his way to the advertiser any way—but in the person who is not in the habit of using honey it excites no interest (unless, possibly, to make him wonder what sort of flower a "bonney" is. The fact that the advertisement is cheap is little recommendation from a business point of view. It is not cost, but results, that count in advertising).

A few years ago, through the judicious use of a small space in a local weekly paper I disposed of more honey in my home town than it had ever used before, a great deal of it first hand, right from myself to the customer (without any peddling), and the rest through the local grocery stores, while "farmers'" honey was being offered for sale in the same stores at a price 20 per cent lower than I received. Of course, a previous reputation for producing a first-class article helped the campaign, but the advertising rounded it off nicely.

The first requisite in an advertisement, whether it be of honey or anything else, is that it shall be news, and that it shall continue to be news, and to make people read it, and look for it, every time it appears, and to miss it when it fails to appear, which latter event, in a really properly conducted campaign, should never occur. The standing advertisement is news the first time it appears, or the first time a reader sees it, after which it is about as interesting as a story of an accident published in the same type time after time.

It will pay any bee-keeper who has any considerable amount of honey to sell, and who wants to get all there is in it, without the intervention of too many middlemen, to take a space, even though it be a very small one, in his local paper, and tell a story, no matter how short, so that it is interesting, about his honey or his bees, and a different one each issue, be it daily or weekly. Don't let the story become old, or the public will begin to lose interest in it, even after it has been rejuvenated, even as they will lose interest in your good honey should they by any chance ever get a can of inferior honey bearing your label.

Cobalt, Ont.

### SOME EXPERIMENTS ON STIMULATIVE FEEDING.

Undue Stimulation Out of Season Wears Out a Queen so that She is Likely to Fail During the Height of the Honey-flow.

BY ALBIN PLATZ.

I have a small apiary within one mile of the heart of Cincinnati; and during the latter part of last summer and early this spring I conducted some experiments on stimulative feeding, selecting for the purpose two colonies which were practically equal in strength—i. e., the number of bees, and the amount of brood and stores. Both had queens of the same age, having been hatched during the fore part of July, 1909. Deciding to use hives No. 1 and No. 3 I commenced operations by placing an Alexander feeder under hive No. 3; and every night, just before dusk I fed this colony one pint of warm syrup (equal parts of sugar and water). I continued feeding until our first frost. I started feeding the latter part of August. The other colony, No. 1, I did nothing to. On Oct. 19, while packing my colonies for winter I carefully examined both colonies and noted that the stimulated one was far superior in every way to the other, and weighed fully 20 lbs. more. I may add that I prepare my colonies for winter by placing a half-depth super filled with rags and dry leaves on top of the brood-chambers, and have never lost a colony packed this way. Having replaced the frames and noted that the queens were all right, I left them on their summer stands, not to touch them again until the following spring.

On March 4 the bees commenced to carry in loads of pollen, so I at once put the feeder under hive No. 3 again, and fed it one pint of warm syrup every evening. The first week in May I opened both hives, and was surprised to find hive No. 3 literally boiling over with bees, and eight frames out of the ten almost solid with brood in all stages, but very little honey. I at once put on a second story of extracting-combs to give the queen plenty of room. Locust-trees being in bloom now, I stopped feeding. On opening hive No. 1 I was disappointed



at its apparently poor condition, having only about five frames of brood and a moderate number of bees. But conditions were soon reversed. White clover commenced to bloom, and at the same time hive No. 3 steadily commenced to lose in strength while its partner, No. 1, forged ahead by leaps and bounds. Its queen was larger and more active, filling every available cell with eggs, while the bees had almost filled the second story with honey. All this time hive No. 3 steadily lost in strength, and on July 8 the queen was superseded. No doubt the stimulus caused by feeding induced the queen to overexert herself, and the result was that she played out when she ought to have been in her prime. This hive remained rather weak all summer, and gave me only 40 lbs. of surplus honey (extracted) while hive No. 1 gave 92 lbs., also about 25 lbs. of sealed combs, which I reserved for emergency in case any colony should be short of stores this fall or next spring. I am convinced that, when all colonies have sufficient stores, it is unwise to feed, and cause the queen to expend her energy when it is not needed as much as during or just before the main honey-flow.

Were it not for the fact that No. 1 swarmed (due to carelessness on my part by overlooking some queen-cells) I am sure my surplus from this colony would almost have been doubled. At this writing the stimulated colony has very little brood and only a fair number of bees, while all of the others are in excellent shape. I believe that colonies which are left quite alone are the ones which give us the best results, and that the bees know better than we when to rear brood and when to retract.

Cincinnati, Ohio, Sept. 17.

#### ESTABLISHING A MARKET FOR HONEY IN THE RURAL DISTRICTS.

BY J. J. WILDER.

It is very encouraging for a bee-keeper to have a ready demand for the honey that he produces, especially when he can feel sure of all returns; and there is nothing that will create enthusiasm in a bee-keeper quicker than to have orders for twice as much honey as he can produce each season. If the people living in rural districts are supplied, this is sure to be the result.

On the public highways, for fifteen or twenty miles I have established what I call my "honey stations." A farmer every five or six miles is kept supplied with honey as long as my supply lasts. Most of these farmers live near one of my apiaries or else at some point to which I can carry the honey without greatly inconveniencing myself. I carry out about as much honey as I think will be needed when I go to bring in a load or to work in an apiary. Sometimes the supply at one or more of the stations runs low before I return again; and, when so, the

parties very often stop at my packing-house while in the city, and carry out a supply themselves.

Usually, at each of the stations there is a sign, "Honey for Sale," and it is surprising how much honey is disposed of in this way to passersby. Many city people while driving through the country patronize these stations rather than buy their honey in the city. Also many tourists buy quantities and carry it to neighboring States. Even the chicken-peddlers load it in their wagons and carry it in this way for miles around. They sell it or exchange it for eggs, chickens, butter, and other farm produce. (This last idea I got in Texas in my boyhood days when my father was peddling.)

The honey is all sold to these stations at regular wholesale prices, the peddlers paying cash for what they buy, and the "stationers" pay as it is sold. The honey that I have reference to is extracted or chunk honey, put up in pint, quart, and half-gallon Mason fruit-jars, and also in one, two, five, and ten pound pails. It is not necessary to do any crating. I have found that this is the easiest way to dispose of honey, and the quickest way to establish a sure market. I have to resort to the city markets to dispose of a part of my crop, but it is not as satisfactory a way.

Cordele, Ga.

#### WHY YOUNG BEES ARE SOMETIMES DRIVEN OUT OF THE HIVES.

BY C. W. POWELL.

On p. 566, Sept. 1, Mr. E. G. Pettit wants to know the reason why his bees are killing the young bees. I happen to know the cause and the remedy. The cause is lack of stores; and the remedy, of course, is feeding. This puzzled me for several years, for I kept seeing young bees, that were apparently sound and healthy, thrown out of the hive in great numbers. I also noted that some hives would suddenly become greatly reduced in bees, but until this season I did not discover the cause and apply a remedy. As often before, I found droves of young bees running away from the hives. I watched until I located the hive they came from, then looked into it and found there was no honey, so I began feeding, and the trouble ceased at once. Young bees are very greedy, and the old bees will sacrifice the young ones before they will starve themselves. It is very important to watch carefully, for it is useless to feed for stimulative purposes unless sufficient food is supplied for hatching brood.

#### MUST WHITE-SWEET-CLOVER SEED BE HULLED TO GERMINATE QUICKLY?

There has been some discussion about the germinating of the hulled and unhulled sweet-clover seed, the general opinion being that the seed must be hulled or else it will not germinate for several months. I took a handful of seed this fall, covered



it upon the ground, and wet it. It was up in ten days. This was the white variety. Sweet clover will not bloom the same year it comes up, no matter how high it grows—at least this has been my experience. In one sense it is an annual. If the seed gets into the soil as soon as ripe, or in time to come up that fall, it will bloom the following season, and so on; but it must have two seasons' growth. My experience has been entirely with the white, so I know nothing about the yellow variety.

#### QUEEN LAYING IN QUEEN-CELLS.

Does a queen lay in queen-cells? If so, the theory that worker eggs are laid in worker-cells and drone eggs in drone-cells, because of the size of the cells, is exploded. The queen surely could not lay a worker egg in a queen-cell if the size of the cell counts for any thing.

#### AN UNDERSIZED QUEEN THAT MADE A LOT OF TROUBLE.

I once thought I had a colony of queen-killers, as I gave queens and cells repeatedly, the bees destroying them all. I had gone over the combs time and again without finding the queen; but one day when I opened the hive I saw a ball on the bottom-board, and when I picked it up and scattered the bees I found a bee about the size of a worker, but shaped more like a queen. I killed it, and this ended the trouble. Now, if I had scattered these combs of bees around among other hives, this diminutive queen would have been killed. Until she was turned on her back she looked like a worker, but the under side of her was very different.

Joplin, Mo.

#### A SHORT CROP IN IMPERIAL VALLEY, CAL.

Cotton-fields Taking the Place of Alfalfa-ranges.

BY J. W. GEORGE.

As the season of 1910 is coming to a close it may be of interest to some to know just what the results were in Imperial Valley. I have talked with a number of our best bee-men, and find that they are all agreed that we are short in our crop. Mr. Wagner, our bee-inspector, estimates we are short about one-third of the normal crop, while Mr. Perkins, who is a closer observer, estimates the shortage to be about half a case.

The question is, why is our crop short? In my opinion, there is just one answer; and that is, there has been too much of the alfalfa-range plowed up and put into cotton. The farmers have the cotton craze; and where it will all end is problematical. It now looks very much as though the bee-men would have to seek new ranges, for the cotton acreage will be increased very largely next year; and if this is done at the expense of alfalfa, what will the crop be next year in view of the fact that it was cut down one-third this year?

Cotton may be a good honey-plant in some places, but it has not proved so here as yet; and I fear that many of us will find ourselves in an unenviable position next spring, for the cotton bloom does not come in this locality until the strength of the colony is spent. Then when it does come, the bees breed up wonderfully; but by the time the colonies get strong enough to store surplus, the cool nights arrive and the hives are full to overflowing with bees with no honey in the combs, and the nights too cool for the cotton to secrete nectar.

I may be wrong in my conclusions; but I am not enthusiastic over the outlook; and to those who contemplate coming into the valley to keep bees I would say, make haste slowly until we see what effect the cotton is going to have on the bee industry here.

There was a shortage of water at the latter end of the season, and all that can be heard on our streets is the water shortage and the future of cotton in Imperial Valley. In a way it is very similar to the condition three years ago when every one had the cantaloup fever. The people went cantaloup crazy, and there was but one remedy—get "stung." However, cotton is a staple, and it looks very much as though it had come to stay, so that, from a bee-keeping standpoint, the future looks very discouraging, and I myself am beginning to wonder where I can go to be sure of a crop.

The same men operated the same bees and under the same conditions as last year; but this year I have noted that we are very short in our yield. We got a very good price for our honey, which balanced things up somewhat; but if there is a big crop on the coast next year, and the cotton acreage increases while the alfalfa decreases, where shall we be?

Imperial, Cal.

#### NEW ENGLAND FAIR.

The Apiarian Exhibit at Worcester, Mass., Sept. 5-8, 1910.

BY BURTON N. GATES.

An extraordinary display of comb and extracted honey, in amount exceeding half a ton, was made by Mr. R. H. Holmes, of Shoreham, Vermont, but which, through courtesy to the less professional and extensive bee-keepers, was not entered in competition. Mr. Holmes says his crop was entirely removed before the first of August, having come exclusively from basswood and clover. One seldom sees finer honey, especially that which is produced in New England. Besides the superior quality of Mr. Holmes' product, both in flavor and color, is the even grading and "polishing" of his sections. Buyers of this "Red, White, and Blue" brand of comb honey have remarked to the writer that they are always certain to find all sections alike in a case. This is a worthy example for packers of comb honey.

Mr. Holmes' exhibit was well displayed, and attracted much attention.

The facilities for displaying the comparative exhibits, on the contrary, were poor. For instance, the comb honey was found in a glass ice-chest, which stood in a dark corner of the hall. It was utterly impossible for visitors to gain any idea of the quality of the honey shown. The fact that the management does not provide better space and more liberal premiums or a larger schedule is declared to be preventing the beekeepers from entering their products. Yet those who were ambitious enough to make exhibits are to be congratulated.

Three premiums were offered in each of three classes. There were several competitors in each of the honey classes, and but one in the class calling for a "colony of bees in 8 or 10 frame hive." Premiums were awarded as follows: Comb honey, 10 sections, 1st prize, \$2.00, Harry G. Sheppard, Globe Village, Mass. Second prize, \$1.50, J. Sidney Whittermore, Leicester, Mass. Third prize, 50 cts., Harry S. Granger, West Auburn, Mass.

Extracted honey, 10 pounds in glass, first prize, \$2.00, Harry S. Sheppard, Globe Village, Mass. Second prize, \$1.00, J. Sidney Whittermore, Leicester, Mass. Third prize, 50 cts., Harry S. Granger, West Auburn, Mass.

Colony of bees, first prize, \$3.00, Harry S. Granger, West Auburn, Mass. Second prize, \$2.00, no award. Third prize, \$1.00, no award.

College Park, Md.

### SWARMING.

**Its Absolute Control, Together with the Production of a Large Amount of Surplus.**

BY F. H. CYRENIUS.

Most bee-keepers will probably agree with me that the production of a frame of brood requires a frame of honey about the same thickness as the brood. Now, there are times when the frame of brood seems more valuable than the frame of honey, for the bees from the frame of brood may bring in two or more frames of honey.

In my plan for swarm control, as in all other plans, the colony is made as strong as possible before the harvest, usually an upper story having been added at fruit-bloom. About one week before clover blooms, the queen is confined in a very shallow chamber,  $3\frac{3}{4}$  inches high, holding frames in which the combs are but  $2\frac{1}{2}$  inches deep, one sheet of Langstroth foundation just filling three such frames.

When the honey-flow starts in at its height the queen is caged in this very shallow body, the upper stories, all the brood, etc., being taken away, leaving nothing but this very shallow body with its caged queen. Upon this body, surplus apartments enough to accommodate all the bees are placed.

The colony now has brood and a queen, and is, therefore, in a normal condition. From seven to ten days after caging the queen, observe if cells have been started, and, if the queen is to be kept, destroy such cells. If a large colony were hived or shaken in such a shallow brood-chamber without any brood, swarming would be the rule; therefore, when the brood is taken away the queen should be caged and the supers put on, the object of confining the queen in the shallow chamber beforehand being to get enough brood started to hold the colony in a normal condition.

The situation is now mastered. The queen should be kept caged from two to three weeks, and then allowed her liberty on the shallow combs. By the time the colony would be ready to swarm, the season is over. If not, the queen may be caged a second time, locality deciding as to the advisability of this.

If the colony is run for comb honey, the force will be directed to the sections. If run for extracted honey, simply leave the supers on, as many as are needed, and at extracting time not a cell of brood will be found in the extracting-combs, and there will be no danger of losing the queen.

During the time that the queen is not caged in the shallow chamber she should be confined with an excluder, which should be removed again when the queen is to occupy the original combs for the purpose of filling with eggs for the subsequent flow. I find it a decided advantage in my locality to check egg-laying at this time.

There is another decided advantage in this system in renewing the queen. Simply place a selected cell in the shallow chamber, and the time required for the queen to emerge and become fertilized will be just about right to accomplish the best results. I try to get just as many laying queens by the first days of July as possible, so that the hives will be crowded with bees by August 15 for our fall honey, at which time I destroy all inferior queens, placing their brood-combs in upper bodies for the surplus. Just suppose there are two strong colonies side by side. Destroy the poorer queen of the two, and give the remaining queen the brood, etc., of the colony in which the queen was destroyed.

To summarize my plan, I get my colonies as strong as possible for the clover harvest, then relieve them of brood-rearing, to a great extent, while the bees are hard at work bringing in the honey. Then I plan to get as many queens laying as possible by July 1, and unite again for the fall harvest, leaving the colonies in fine shape for this fall flow and for the winter. This very shallow chamber forms a favorable adjunct to the brood-chamber if placed on top, and the bees allowed to fill it with honey, so that it forms part of the hive. Especially is this true for outdoor wintering, the space under the shallow frames forming the best kind of passageway.

Oswego, N. Y.





HIVE-COVERS PROTECTED BY TAR PAPER TO PREVENT LEAKING AND CHECKING.

### A CHICKEN THAT GOES THROUGH THE APIARY EVERY AFTERNOON CATCHING DRONES.

BY W. E. M'FARLAND.

My apiary of 85 ten-frame colonies is run for comb honey in 4×5 sections. The illustration shows a part of it, and also my honey-house in the background, which is also the chicken-house. I have a chicken that makes the rounds of the apiary every afternoon about half-past three or four, catching drones which he eats.

Notice that the covers of the hives are protected by single-ply roofing-paper. I think this is a fine thing, as it keeps the hive-covers dry and saves the paint, and also keeps the tops from checking.

Paris, Mo.

### THE SOURCE OF WATER FOR IRRIGATION.

BY WESLEY FOSTER.

As the vapor-laden winds blow from the Pacific Ocean eastward they encounter high mountain ranges; and in striking these cold granite shoulders of the continent they are forced to give up their moisture in the shape of snow in winter and rain in summer. These winds, generally coming from the west, leave most of their moisture on the western slopes of the mountain ranges; and this is why the streams flowing from the western slopes carry more water for the same area drained than the eastern-slope streams.

The higher and more continuous the

mountain ranges the more water there is for irrigation. An example of this is the Northern Colorado farming district comprising the largest stretch of irrigated land in the United States lying in one body. The Front Range extends in an unbroken line from about seventy-five miles south of Denver to the Wyoming line. The range has a great number of peaks from twelve to fourteen thousand feet in height, with the great bare stretches of slopes, ravines, crevices, and canyons from twelve thousand feet down to eight thousand feet, catching and holding the winter snow till long into the hottest summer.

This great granite wall, lying forty to fifty miles to the west of our fertile farms, always in view, a visible record of the amount of water for the coming season's crop can be easily read by the observer who has watched the interesting sight of the gradual accumulation of snow-fields and filling ravines for several years. After a week of storm, the whole range being hidden from view, the clouds rise or are dispelled, and then the wind blows as only the wind on the range can blow. The writer has seen the mountain peaks almost hidden in the mist of driving snow when the sun was shining brightly, and this at a distance of forty miles. It would hardly be comfortable making one's way through such a storm. But such winds do incalculable benefit in drifting the snow into ravines and gulches.

The timber-line is reached at about eleven thousand feet, and from this altitude down to about eight thousand feet the mountains are covered with a fine growth of pine. These pine forests catch and hold the snow





SNOW IN THE MOUNTAINS FURNISHES THE WATER FOR IRRIGATION.



A. RINGELE'S APIARY, SIERRA MADRE, CAL., CLOSE TO THE FOOT HILLS OF THE MOUNTAINS.

Mrs. Acklin described this apiary in "Bee-keeping in Southern California," page 405, July 1.

till long into the summer, most of it being melted out of the woods in average years by July 15. The preservation of the forests is a very vital element in the future of irrigation; and unless the denuded areas are replanted our water supply will be greatly lessened. The water flowing from the mountains in April and May is not used unless caught in reservoirs, and so is lost. The cheapest reservoirs are the one's nature provides, and they are also subject to the least loss. More than a foot of water will evaporate from the top of a storage reservoir in the valley while the loss from a snow-bank will be very much less, and does not entail the expense of building a dam and keeping up improvements.

The roughness of the ground in the mountains saves a large proportion of the snow because of its blowing into deep drifts. This blowing and sliding of the snow into the ravines is seen in the upper picture, looking across the ice and snow on Silver Lake toward the woods on the slopes and the high craggy peaks of the range. These peaks are the "Arapahoes," and the large hollow in the upper central part of the picture is the Arapahoe Glacier, the only true glacier in Colorado. This glacier furnishes Boulder with its water, and is the principal source for the water in the lake shown, which is a true glacial lake, owned by the city of Boulder, and is one of the reservoirs for the Boulder water supply. Much of the water flowing from the lake, however, is used for irrigation, as the water was filed upon before the lake was acquired by the city.

The pictures were taken about March 15,

1910; and though the snowfall was below normal for the year, the general characteristics of the snow storage are shown. The snowfall after March 15 was very considerable; but many claim that these late snows do not become settled and packed the way they should to last till late summer. This soft unpacked snow melts off early in the season, and also tends to carry with it the hard-packed ice-snow.

The upper view shows the Arapahoe glacier with Silver Lake in the foreground; also some of the timber which aids so much in preventing the snow from melting off early in the season.

The second one gives an idea of the way the snow drifts into the depressions up above the timber-line. Notice that there is nothing but a few shrubs growing, and these keep close to the ground.

The effect of the timber in causing the drifting of the snow to a great depth is shown in the lower picture. This place, however, is a natural depression; and the timber shown at the back of the drift is not entirely responsible for its great depth.

The first two views were taken March 15, 1910, and the other was taken June 30, 1909, which was a year of exceptional snowfall.

The snowfall in the lower foot-hills, while accumulating in the woods, melts off very early, and so does not benefit the farmers in their late irrigations unless caught and stored in reservoirs.

The means that must be adopted to conserve all the available water supply are principally three. First in importance is the preservation and replanting of the deforested areas. This is also of paramount





AN ALMOST IMPENETRABLE MASS OF SWEET CLOVER WHICH  
CHOKED OUT CANADA THISTLE.

importance from an economic point of view, as lumber is becoming very scarce. Government aid will have to be applied, for there are few private parties or companies that can wait the long term of years for the returns. The government forest reserves are the proper places for these replanting operations to start. And with the popular interest which is aroused we shall not have to wait many years for this work to begin.

Second, we shall have to have reservoirs enough to impound all the flood waters which usually go to waste. In many districts this is almost fully accomplished, and the saving in floods averted is beyond computation.

Third, it has been found that an underflow exists in nearly all parts of Eastern

practiced in California.  
Boulder, Col.

### SWEET CLOVER AS A NOXIOUS-WEED • ERADICATOR.

Canada Thistle Choked Out.

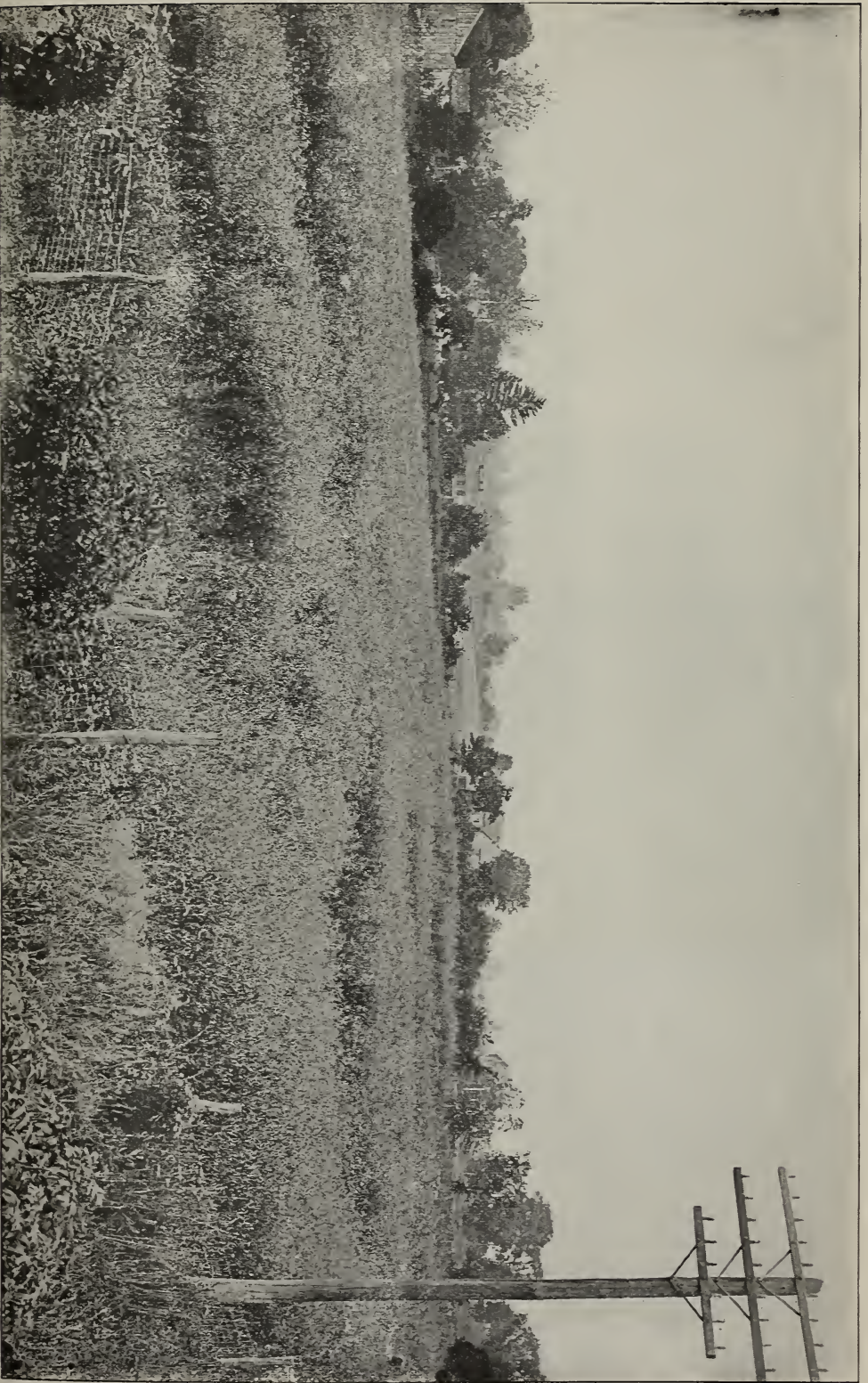
BY E. S. HACKER.

Sweet clover is one of the most valuable plants known to the farmer and bee-keeper alike. To the bee-keeper it is valuable as a honey-plant, for it furnishes pasture for the bees for quite a length of time, and yields nectar very abundantly. It is a splendid plant for a white-clover locality, as it prolongs the honey-flow fully two weeks or

Colorado east of the foothills. This is held quite close to the surface by an impervious subsoil of clay which is as effective as a rubber blanket would be. In most places this water is from 25 to 200 feet down. Where the sub-surface flow is lower than 150 feet it can not be profitably pumped. This sub-surface flow is largely from the irrigation water which sinks down too far for the plant-roots to use, and so is lost unless caught and pumped back to the surface. Electric power is now so reasonable that hundreds of farmers are pumping their under flow back to the surface by means of the electric motor.

There is one more conserving method that has not yet found its way into Colorado enough to speak of, but is sure to come, and that is the carrying of water in closed pipes, saving the seepage and loss from leakage which always occurs in the open ditches. As water becomes higher in price we shall see the adoption of this, just as it is





AN ACRE AND A HALF SOWN TO SWEET CLOVER IN 1906, WHICH HAS BEEN ALLOWED TO RESEED ITSELF EACH YEAR; THE AVERAGE HEIGHT IS NOW FROM 7 TO 9 FEET.

more. The former blooms first while the latter comes in immediately after the white is through blooming, thus lengthening the flow.

Its value to the farmer as a noxious-weed eradicator deserves mention. During June, 1906, I sowed 10 lbs. of sweet-clover seed on a plot of ground of about an acre and a half, which contained Canada thistles. The plot was not plowed, the seed being sown simply on the sod. In due time the plants appeared and grew luxuriantly in spite of the drouth which overtook it. It has been left standing, and allowed to reseed itself annually, until now it has become an impenetrable mass, having attained a height of from 7 to 9 ft. on an average. This luxuriant growth has almost entirely choked out every Canada thistle and other weeds.

I think bee-keepers and farmers would do well if they would make use of their waste places and fence-rows which are infested with weeds, to sow sweet clover and allow it to reseed itself and choke out the weeds. It might just as well be growing in waste places and fence-rows as weeds, and it would supply the bees with abundant pasture. It might be objected to, and termed a weed; but it is no more a weed than the other clovers; and if it is, it is a very valuable one.

I am satisfied that sweet-clover seed will be in demand in a few years, and the seed-dealers will be compelled to carry it in stock, owing to the increased acreage and its popularity as a valuable plant of many uses to the farmer, stockman, and bee-keeper.

In classing sweet clover I think it takes second place to alfalfa, with the other clovers following.

I would urge every farmer and bee-keeper to sow a trial lot and find out the good as well as the bad qualities. However, in my estimation it has no bad qualities. They are *all* good.

Ephrata, Pa.

#### HOW TO TELL WHEN HONEY IS TOO THIN TO EXTRACT.

BY CHAS. MITCHELL.

During the season of 1909 we stopped extracting, although our combs were from three-fourths to seven-eighths sealed. We never extract unless the combs are entirely sealed or unless the bees have been idle for at least two days. Of course, if the honey is



MITCHELL'S WAX-PRESS WITH WHICH HE SECURED 66 POUNDS OF WAX FROM 200 COMBS.

from clover, and it is left in the tank two or three days, the thin honey will be on top. When we take off honey if any part of a comb is unsealed, no matter for a space only two inches square, we grip the comb in both hands, and, holding it in a horizontal position, jerk it up and down. If any of the honey flies out we stop extracting at once.

#### SIXTY-SIX POUNDS OF WAX SECURED FROM TWO HUNDRED COMBS.

Eight years ago I constructed the wax-press shown in the enclosed engraving and secured sixty-six pounds of wax from twenty ten-frame supers, over  $3\frac{1}{4}$  pounds per super. This is as much as any one is able to obtain with the very latest improvements up to date.

Molesworth, Ontario, Can.

#### MOths INFECT NEGLECTED COMBS.

BY HERMAN C. SHORT.

The combs shown in the illustration belonged to a farmer who lives near here, and it shows the result of his neglect.

Winchester, Ohio.

[There used to be a number of so-called patented moth-traps on the market, exploited as a sure remedy for moth-infested hives, and many dollars were wasted before bee-keepers learned the simple rule for preventing moths—that of keeping all colonies strong. Most bee-keepers have found, also, that Italians protect their hives much more vigorously than the blacks, and so in later years we no longer hear very much about this enemy that results only from carelessness.—Ed.]



## HOW QUEEN-CELLS ARE KEPT WARM.

BY M. T. PRITCHARD.

On page 544, Sept. 1, Dr. Miller asks this question: "What possible difference can it make whether a cell is in a cage or out so long as it is in the same temperature? Now, doctor, are you sure that the temperature *is* the same? I am quite sure that it is not, even when the cages are hung between two frames of brood in a strong colony. I am convinced that bees can and do create warmth and transmit it to the brood by bringing their bodies in direct contact with the brood whenever it is necessary; but this is done only when the welfare of the brood requires it.

In our experiment which we carried on in the bee-cellar under the machine-shop a few winters ago, we found that, when the bulb of a thermometer was placed against brood in a colony, it would show a temperature of about 97 degrees; but when placed in a colony which had no brood (even though this colony was the stronger of the two), the temperature would be below 90.

Try this experiment: Take a colony strong enough to fill two hive-bodies. Have brood in the lower body, and honey only in the upper. Examine them during a cold spell, and you will find the bees in the lower body warm and active while those in the upper body will be numb with cold. At one time we tried hatching our virgins in an incubator which was run at about 97 degrees. The cells which were put in the incubator soon after they were sealed hatched promptly on time, and produced large active virgins. Why do the bees build the queen-cells so far out beyond the brood if it is not to enable them to get on all sides of the cell at once?

### TIME REQUIRED FOR THE DEVELOPMENT OF A QUEEN.

As to the number of days between the laying of the egg and the emergence of the queen, I think that Cowan is right—that is, if the conditions are the best. During a very heavy honey-flow queen-cells are not built as large or fed as

well as during a light flow, and these underfed cells are slow in hatching.

Medina, Ohio.

## PACKING HIVES IN LEAVES FOR WINTER.

BY CHAUNCEY A. GRAVES.

For thirty years my hives have been packed in leaves, summer and winter, there being enough leaves to cover the supers six to eight inches. I run for comb honey. The colonies are in Langstroth hives with six combs to the hive, the remaining space being filled with three wide frames, each one holding 8 one-pound sections. The super on top holds 48 one-pound sections.

As soon as the colonies swarm I remove all queen-cells except one, and seldom have a second swarm. I never use a wooden cover, but place sticks across the frames and put woolen cloth or sacking over them. When the supers are taken off, the leaves are 16 to 18 inches deep. I place boards on top weighted down with stones. The colonies remain in this condition until the supers are put on in May. I seldom lose more



HOW MOTHS RUIN COMBS THAT ARE NOT TAKEN CARE OF.





COMB-HONEY COLONIES KEPT PACKED IN LEAVES THE YEAR ROUND.

than one or two colonies during the winter, and some seasons I do not lose any.

When steady cold weather comes I close the entrances with bran-sacks and shut down the drop-door. I open this again when the thermometer registers 60 degrees, so that the bees can have a cleansing flight. They generally have several before spring comes.

During the first warm days of March or April I feed 25 to 35 pounds of the best granulated sugar, in the proportion of ten pounds of sugar to three quarts of scalding-hot water.

East Whately, Mass.

### WHY VIRGINS TEAR HOLES IN QUEEN-CELLS.

Stimulating a Starved Queen with Royal Jelly.

BY O. B. METCALFE.

I do not agree with Dr. Miller, page 578, Sept. 15, that virgin queens have a passion for tearing holes in queen-cells regardless of what may be in the cells. I have had my "noticer" at work on that point, and I have seen very strong evidence that the virgin queen tore those holes Dr. M. referred to, for the definite purpose of getting back in the cell to eat the royal jelly she did not consume while growing, and could not turn around to eat before coming out. Her cell, in most cases, is like the fellow's room that was so small he had to go out in the hall to turn around—even more so, for the little door she cuts as she comes out is so small in many cases that she can barely squeeze out, and often can not get back through it, therefore she must cut a new hole in the side of the cell or enlarge the one through which she emerged. In case she does enlarge the one through which she first came out, she

may still have to cut another hole in the side of the cell, for a bee can not back out wings and legs first through as small a hole as it can crawl in head first. Perhaps some of the holes Dr. M. noticed were cut under these circumstances with a definite aim at getting out.

Many readers, no doubt, think such points of little importance, and not worth studying or writing about. However, I feel that such an attitude is a mistake, and I will take a long chance that any thing I can learn about a honey-bee may be of practical value to me, as well as of interest. It has often turned out so. Take, for example, the point I have just been discussing. I took one of the first newly hatched queen-cells I ever saw, and carefully cut it open to see what it was like inside. I learned that part of the royal jelly was left, and that, down near the end, the cell had a strong tough lining of cocoon, and that up near the base it seemed to be wax only. Later, when I saw a virgin cutting open her old cell in a nursery cage, just as described by Dr. Miller, I might easily have decided that she was doing it for pastime; but I stopped right there, and fell to studying her actions. I thought of the royal jelly that was probably left in the bottom of the cell, and concluded that perhaps she wanted it. Such turned out to be the case; for as soon as she had a hole large enough to allow her head and thorax to enter she settled down to a good meal of the royal jelly, which she nearly cleaned up at that one meal, partially dried as it was. I decided then that perhaps the bees were not feeding her enough, and that, if such were the case, it certainly was a strong argument against the nursery cage. Later in the season I noted that the virgins in the hive sometimes do the same thing where they could at least have honey, all they wanted, and decided that it was not a question of starvation with them, but that they liked it.



I acquired this knowledge without expecting ever to make any practical use of it; but now when I open one of my queen-raising nuclei, in which I have previously placed an unprotected cell to hatch, and find a hole cut in the side of it, I do not close it at once and mark it for a new cell, for I know that the virgin may have hatched and cut the hole in the side later, and the bees for their part may have stuck the little swinging door back; so it does not show that the queen ever cut her own way out. With a penknife it is an easy matter to determine whether or not this is the case. If the cell is solid and tough on the point, no time need be wasted hunting for that virgin. She has been dragged out dead through the side opening; but if the little door opens when you pick at it you can bet that the queen got out all right. So much for knowing the habits of virgins, but that is not all.

One day I opened a hive to see if the bees had released a queen I was giving them in an introducing-cage. They had not released her, and she was nearly dead. I tried to feed her honey on the end of a straw, but she barely tasted it and crept away. She was a fine queen. I hated to lose her, and I did not lose her. I bethought me that the young queens liked royal jelly better than honey, and decided to try it on her as a stimulative food. It worked like magic. No sooner had I offered it to her than she began to lick it up eagerly. She ate a quantity equal in size to half a grain of wheat, and in half an hour she was quite lively. I then introduced her successfully to another colony. Afterward I tried the plan again with some success. If you have a fine queen arrive half dead in the mail, try it.

#### DOES THE FIRST HATCHED TEAR DOWN THE OTHER CELLS?

One more thing about queens cutting open queen-cells. On page 479 Mr. Holtermann raises the question as to whether or not the first virgin ever cuts open the other cells from which a rival queen might come. I have seen just one case where the evidence would convict the virgin queen beyond a doubt. One boiling-hot day this summer a young man by the name of Wayne, who has worked for us this season, sat with me for three-quarters of an hour right out in the sun while our dinner was waiting for us three miles away, and watched a virgin cut open a queen-cell from the beginning to the point where she could get her head in to bite the young queen. The workers stood around and took no part whatever. I had heard that the virgin cut a hole in the cell and stung the young queen. This one made no attempt to sting the victim, but she went after her with her jaws as hard as ever she could.

Mesilla Park, N. M.

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My boy is in the bee business here. Two years ago his bees averaged over 100 lbs. to the colony. He moved most of them where fireweed was plentiful. Last year they did not do so well.

Gate, Wash., May 27.

J. S. BLAIR.

## WHAT SHOULD BE THE PRICE OF HONEY?

### The Cost of Production Should Not be Taken into Consideration.

BY OREL L. HERSHISER.

Under the caption of "What is the Cost of Honey to the Producer?" the subject of "What should be the Price of Honey?" is also discussed by Mr. F. L. Pollock, page 552, Sept. 1.

Mr. Pollock certainly makes some startling statements, and expresses himself as being satisfied, as appears from his discussion, with a wholesale price of from 5 cts. per pound for dark honey to 7 to 9½ cts. for light, depending on the extent of the crop, and as to whether there is a fall flow, the fixing of such price being determined solely by adding 20 per cent to the value of the investment, including interest on capital, owner's labor, maintenance of horse, and miscellaneous, and dividing the total by the number of pounds of honey produced.

Mr. Pollock seems doubtful of the wisdom of the publication of his doctrines, and well he might be if there were any likelihood or possibility of their adoption. Fortunately such a scheme of making the price of honey is impossible of accomplishing in a general way. It is at once apparent that each individual bee-keeper would have a price of his own as the result of the computation. The labor account of different bee-keepers would not always agree, for some operators will accomplish more in a given time than others. The capital invested per colony varies with different bee-keepers, and some have more expense in keeping up a horse than others. Some have to hire horses. Moreover, the keep of the horse varies in different years according to the price of feed.

Suppose an apiary of from 75 to 100 colonies. The equipment for running the smaller number of bees is certainly nearly as great an expense as for running 200 colonies, for nearly every item of expense in the one outfit will be found in the other—the difference of a little larger and more complete equipment for the larger number being inconsequential, and not at all in proportion to the greater number. On the other hand, the apiarist with from 350 to 400 colonies will have an expense account but slightly larger for his greater number of colonies than the man with 200. It will certainly require a greater number of hours in labor per colony for the season, to operate a small than it does for a large number; and if the bees are in out-apiaries the time required in going and coming would be the same in one case as in the other. An examination of a few colonies in an apiary is frequently all that is required to give an idea as to the condition of all the others; but such examination requires as much time to show the condition of an apiary of 100 colonies as for one of 200. So it is plainly apparent that the expense per colony is greater for the smaller number. Mr. Pol-

lock values time at 40 cts. per hour; but there would certainly be a difference of opinion among bee-keepers on this point. I hired a tinsmith to do a job, and he charged me 50 cts. per hour, and extra for materials, such as solder and rivets. The same is true of my blacksmith. A plumber did a small job for me, and his time account was 60 cts. per hour and extra for materials. Where artisans get 40 cts. per hour a bee-keeper's time ought to be worth at least that much, for expert bee-keepers are surely as much trained specialists as are artisans. I for one consider my time and skill as equal or superior to that of my plumber, and superior to my tinsmith and blacksmith.

According to Mr. Pollock's method of ascertaining the legitimate price of honey, John Smith (merely one of the numerous individuals of that name) with 400 colonies of bees would be selling his honey at a price considerably lower than Sam Jones with but 100 colonies; and the Tom, Dick, and Harry bee-keepers more or less numerous in every honey-producing locality would certainly present a valuation on their time that would vary according to their number.

The Pollock method of fixing the price of his honey is novel as well as demoralizing if adoption were attempted. Did you ever hear of the price of wheat, hogs, or potatoes being ascertained in any similar manner? Such a method would require a different price for not only every bee-keeper but for every producer of commodities.

There is just one law by which the legitimate price is fixed—i. e., the law of supply and demand. If you have high prices, one of two things has happened: either the supply has in some manner been curtailed or the demand in some manner increased; and, conversely, if low prices prevail, either the supply is abundant or the demand has in some manner been curtailed.

The law of supply and demand is subject to various influences which enable those familiar with its application to make an unjust use of it. The unscrupulous honey-merchant will tell the bee-keeper that there is a bumper crop of honey, notwithstanding reliable advices of crop committees and editors who have taken particular pains to ascertain the facts. On the one hand they will, in extremely confidential mien, state the offerings at nominal prices as being in great number and volume when communicating with sources of supply, and on the other hand inquire with feverish excitement of those supposed to be able to give reliable information where they can get honey to fill orders. Some will split hairs over quality, and resort to tricks to try to show up honey to the poorest advantage when purchasing. But notwithstanding the outside influences on supply and demand, the law still holds good; and if the merchant can fool the bee-keeper he does so at his own profit and sells at the highest price at which he can dispose of his holdings, regardless of what his stock cost.

Demand may be increased by finding new

markets, and by stimulating the trade you already have to take more of your goods. Whatever price you are able to obtain for your honey is legitimate. No fear need be entertained of getting *more* than it is worth. Cost of production has nothing to do with the matter, except that doing business at a loss will put the bee-keeper out of business sooner or later, which would decrease supply and cause a rise in price. If cost of production were to be considered, *a la* Pollock, in the seasons of 1906 and 1907 I should have had 40 cts. per pound for a poor quality of extracted honey. But, unfortunately for me, I could not get it, because some other bee-men not far distant produced good crops which could be sold at a fair profit at less than one-third that price. Because other bee-keepers had good crops I was obliged to operate my apiaries at a loss those seasons, and sell at such advance over ruling prices as, by persistent effort, with my light crop as an argument, I was able to obtain.

If there is a shortage in the honey crop, and high prices are, in consequence, obtainable, I, in common with most other bee-keepers, freely avail myself of them, even though I am so fortunate as to have a large crop. And why not? Perhaps soon there will be another season when the tables will be turned, and others will have the paying crop, and for my season's work I may be scantily compensated.

Conditions generally are such that scarcely any thing a bee-keeper uses may be mentioned that has not advanced in price; and the justice of higher prices for honey is so apparent that "those who run may read." When all bee supplies are high, and higher prices threatening, as well as bread and meat, and all food products, why not honey? If the dairyman who flows the land with milk can not prosper, except by 8 to 10 cts. per quart, and 35 to 40 cts. per pound for butter, as compared with about two-thirds those prices not many years ago, it seems evident that the apiarist who flows it with honey can not prosper accordingly without a corresponding rise in the market value of his own product. These fairest fruits of rural husbandry being mentioned together in Holy Writ, to indicate the richness of the Promised Land, were undoubtedly considered of equal importance, and there is no indication that their food values have changed, but it is apparent to every observer that their corresponding market values have gotten out of all equitable proportion.

Mr. Pollock's discussion has brought out prominently one fact of great importance; and that is, that honey-producers with 200 colonies or thereabout are producing honey at insufficient profit in the average season if they sell their honey at less than 9½ cts. per pound wholesale. As shown above, the profit is less for smaller apiaries. An examination of the figures submitted will show that those who sell their honey at 7½ cts. per pound are getting absolutely no



profit out of the business. *Bee-keepers who sell best extracted honey at 7½ cts. or less, take notice.* Of course, this is on the assumption of 50 lbs. per colony in the average season, and I think that hits the most of us. The specialist depending on the profits of bee-keeping to a great extent can stand no shrinking of that 20 per cent net profit. There are too many little shoes to buy. Prosperity in apiculture means that we must have more than 20 per cent net profit, which means higher prices for honey to the producer.

Kenmore, N. Y.

[We do not understand from Mr. Pollock's article that he would reduce his selling price if he found he could produce at a lower cost, nor that he would base the selling price merely on the cost of production. As we look at the question, he was only making an effort to show that, under those circumstances, the two-hundred-colony man is probably making a safe profit on his investment.—Ed.]

### THAT HONEY-HOUSE OF MINE.

BY LOUIS H. SCHOLL.

One of the first essentials in up-to-date bee-keeping is a convenient and substantial honey-house and work-shop. It is the very next necessity after the bees and supplies are secured, no matter whether for one or more apiaries. A well-kept and conveniently arranged work-shop should be the pride of every bee-keeper. Here the ever ready tools, each with its place and ever in its

place, make his work much more enjoyable. The honey-house, for economy and convenience, should be under the same roof, but at the same time it is preferable to have the two parts separated from each other. To combine the two into one, and use both for a work-shop or a honey-room, is most disagreeable indeed. This is too often done, not only by such bee-keepers as can not afford a better arrangement, but by many who are able to have up-to-date conveniences.

How many bee-keepers have a really suitable place in which to do their work in the best possible manner? The majority of the work-shops that we have seen have been in some crowded place, made more crowded because of the fact that nothing had a definite place, every thing being thrown around the room, so that care had to be taken in getting about. The same is true with most of the honey-houses, many of them being the most miserable makeshifts, in small close places without ventilation—regular sweat-boxes where the work was every thing but agreeable. We have had these experiences at various times in the past, but it did not take us long to study over the problem, with the result that we constructed a building that answers its purpose so well that we have decided to tell others about it, as so far it is proven to be the best that has ever come to our knowledge.

Fig. 1 shows our building, which is both honey-house and work-shop. It is 24 ft. long, 14 wide, and 18 high. The view-point is from the south, so that the long side with the large shutters is to the southwest. These provide shade during the entire day, which shade, in connection with the cool south

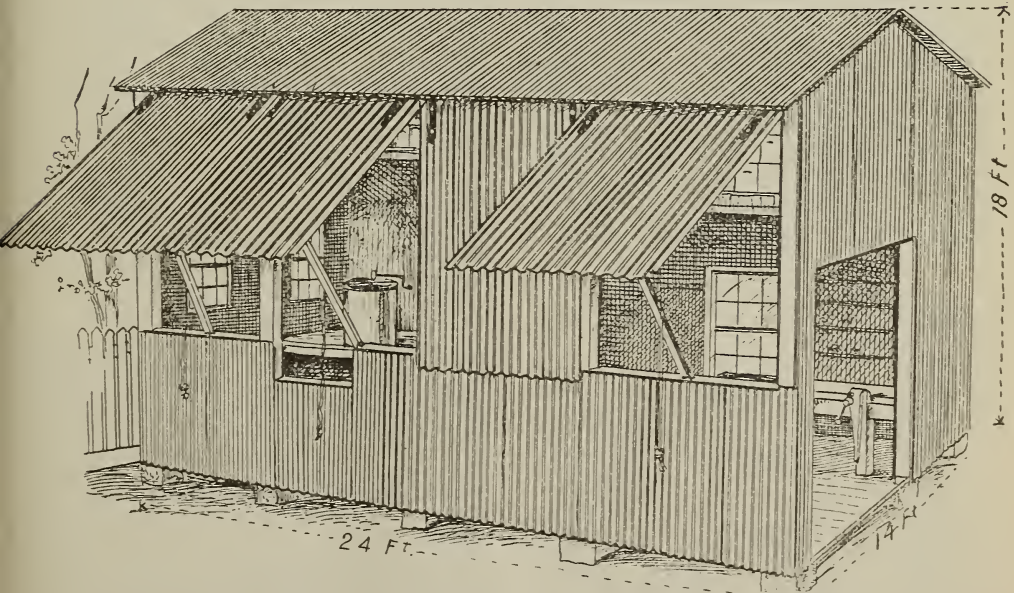


FIG. 1.—SCHOLL'S HONEY-HOUSE AND WORK-SHOP; EVERLASTING, FIREPROOF, AND YET COOL IN THE HOTTEST WEATHER.

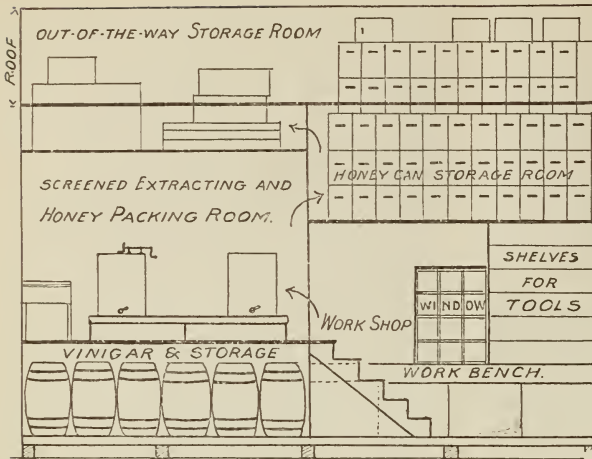


FIG. 2.—CROSS-SECTION OF SCHOLL' HONEY-HOUSE AND WORK-SHOP, SHOWING THE FOUR FLOORS.

breeze which enters the building through the large shop-door, 7×9 ft., and the opening the entire length of the building under the shutters, 8×24 ft., makes the room a cool place to work in, especially as there are two additional large windows on the rear wall.

Figs. 1 and 2 show the general arrangement of the building, the different floors, and the purpose of each floor. The reason that the honey-room is elevated is that it enables loading in the supers of honey without any high lifting as they are taken right from the wagon. This is also true when loading the wagon with cases of packed honey, the floor being just a little higher than the top of our special wagon. In this way we have very little real lifting to do, even at the depot, where we drive right up to the platform. This feature is a great convenience, especially where there is a large crop of honey to handle. We haul all of the honey to this house in the supers, and then ship it out in cases weighing from 120 to 140 lbs.

Fig. 2 shows the honey-room with the storage-room below and another above it,

the other half of the building being taken up by the workshop with an upper story for holding our honey-cans. From the shop, steps lead through a door in the screened partition or middle wall, shown by the first arrow. From the honey-room we can get to the storage floor for the honey-cans so that the cans are always in ready for use. Also from this upper floor it is easy to get to the out-of-the-way storage-room where we keep material that we do not need immediately.

Figs. 3 and 4 show how the large shutters are made. These are so arranged that any one of them can be opened at will whenever more light or ventilation is desired. They are supported at the top by strong iron hinges, and operated by the folding supporting-arms, original with us. These work al-

most automatically, as a little push on the extended arm from beneath closes the shutter immediately, and a firm hold of the rope with the other hand prevents the shutter from slamming against the wall. To open them it is necessary only to push the lower end of the shutter away from the wall slightly, then pull on the rope. The arms, being extended full length, remain in this position without being fastened in any way. The shutters are of light construction, being only frames covered with sheets of corrugated iron. Although light they are heavy enough to stand even the hardest wind.

The only parts of the building that are screened are the front side of the honey-room from the rear end of the building to the middle, where in Fig. 1 the shutter comes down. This inside partition wall is screened, but only from the honey-room floor to the under side of the can-storage-room above. This leaves the vinegar and storage-room below, open from the work-shop, and the can-storage-room open from the honey-room. The front side under the shutters of the can-storage-room is also screened. All of this, together with the two screened windows at the rear, keeps the bees out of the honey-room entirely. The work-shop and storage-room next to it under the

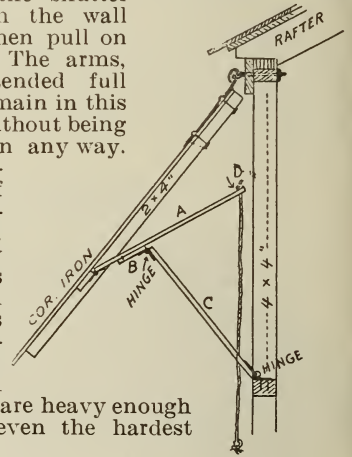


FIG. 3.

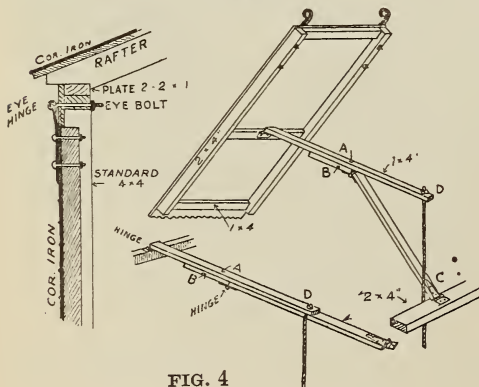


FIG. 4



honey-room are entirely open, no screen being needed.

The whole building is cheaply constructed. All the lumber used is what is known as No. 2, which can be bought at a much lower price than first class. The whole thing is covered with corrugated galvanized-iron roofing, making the roof and walls durable and fire-proof.

New Braunfels, Texas.

## CONDITIONS IN CUBA.

Conditions Brighter than for Some Time.

BY FRANK REIMAN.

The prospects for a large crop of honey are fine in this part of Cuba. We have had abundant rains without any excess, as in other years. The Cauto River never rose a foot above high tide. It usually rises from 40 to 50 feet at Cauto in ordinary years, in May or June, and again in September or October, which are the cyclone months. Here we still have plenty of woods which, I think, are the source of the rainfalls. In Manzanilla it sometimes does not rain at all in the summer time, although it borders on the sea, because there are no woods nearer than about 20 miles. The indications are that in fifty years most of the island of Cuba will be barren if the destruction of woods keeps on, which it will unless the United States government takes hold of things here and does better than it did under Magoon's administration of Cuba. It must be remembered that there is no rainfall between October and May; and when the woods are cut off there is very little rain in the summer, when it is absolutely necessary, on account of the scorching heat from a vertical sun and the thermometer at 90°.

The spring honey crop begins with the first rains in March or April, and lasts till June or July. In case there are no rains in June or July then there are bad times for the bees. The first very dry summer I experienced in Cuba I lost 500 hives. Last summer was very dry; and after feeding \$200 worth of sugar I still lost 400 hives, having only 550 left, and mostly in poor condition. This year we had plenty of rains at the proper time, and the bees actually increased from 1050 to 1100 hives after the close of the spring honey crop. All the hives are full of brood, and in good shape to begin on the fall crop, which begins Sept. 1, and lasts to Oct. 15, after which we have our winter crop of bellflower or white morning-glory.

I started March 1 with three yards, containing in all 550 hives. I started two new yards and increased to 1100 hives. The bees will probably increase to 1300 by Nov. 1. Last year I had natural swarms in November, which made their full share of honey. My spring crop was 70 barrels, mostly dark honey. My fall crop, which will be all dark, will be about 25 barrels; and the winter

crop, which will be pure white, will be over 100 barrels. Our barrels hold 50 gallons each, or about 600 lbs. My wax crop will be about 4000 lbs. this year. I have all five yards along the Cauto River, the yards about a mile apart, and the furthest is only three miles from the home yard.

In seven years I have known only three days when the bees could not work in Cuba. On Jan. 24, 1904, the thermometer was 34° in the morning, and never reached 55 all day, with no sunshine at all. In the same year, May 15, we had heavy rains all day, being a cyclone storm. On Oct. 18, 1908, we had another cyclone storm which demolished the bee-house and drowned several colonies. In the rainy season the showers fall, usually, between 2 and 5 in the afternoon, never in the morning and very seldom at night; but cyclone storms rain day and night. However, the winters in Cuba are very fine. The thermometer hardly ever goes as low as 55, and never above 80. For this reason Cuba is a very popular winter resort.

Cauto, Cuba.

## THE BEST HONEY-COMBS ONLY FROM NEW COMBS.

BY T. P. ROBINSON.

Seeing an article in GLEANINGS for Aug. 1, setting forth the importance of using only virgin or newly made combs for the production of the best grade of extracted honey, and by the request of the editor to hear from others on the subject, I have been persuaded to give my own experience, which is an absolute conclusion in my case or so far as I am concerned.

Mr. Leon C. Wheeler, page 482, Aug. 1, in his contention that the best grade of extracted honey is taken only from virgin or new combs, is correct. There is not a comb, that has once contained brood, that will produce quite so white or quite so mild a honey in flavor as a new comb. I have noticed that even white combs one or more years old that have never contained brood do not produce quite so good a grade of extracted honey as the new combs. The difference is very slight but noticeable.

Honey from combs that have contained brood is darker and stronger, even when produced in the same hive, filled by the same bees, and gathered from the same flowers. The difference is not so great in my case when producing a lower grade of honey; but when I have a special order for the very best I select the white or new combs from which to take the honey.

Fortunately I am located in a country where the honey is very uniform, both as to color, flavor, and body; and honey taken from the brood-combs goes as a first-grade article. I never have to discount on account of having brood-comb honey. This has been my observation for the last ten years.

Bartlett, Tex.

## Heads of Grain

from Different Fields

### Uniting a Bee-tree Colony with a Weak Colony in a Hive.

A few days ago I learned that some log-cutters about a week before had cut a bee-tree. When I reached the place I found that all the combs and honey had been taken. I placed a box above the hole in the log, removed what little comb there was left, and placed it in the box. Then with my hands I took out all the bees which I could get and put them in the box. I then cut a hole above the place where the bees were, blew some smoke in, and the way the bees came out and went into that box was certainly amusing. I wrapped the box up in a sheet and carried it home.

To unite these bees from the tree with another weak colony that I had, I poured half a teaspoonful of peppermint into half a gallon of water and sprinkled both lots of bees, making them pretty wet. I then bumped the bees from the tree on to the frames, and with a soft brush got them all down into the hive. I expected to see them fight, and watched them for about an hour, but could see nothing of the kind. To-day this colony is the very strongest one I have. It is doing finely in every way. The peppermint gives all the same odor, so that they do not know one from the other.

The queen ought to be removed when the uniting is done.

Columbia City, Ind.

FRANK LANGHOR.

[The only trouble when two lots of bees are united is that the scent is different, and there is danger of the bees fighting. Usually, gentle bees like Italians or Carniolans can be united without any trouble. We do not attach very much importance to peppermint water. There is no harm in using it if one cares to. Smoke is much more convenient; and where it is necessary to give two lots of bees the same scent we would put a little tobacco in the smoker.]

If there is any danger of the bees fighting before uniting, trouble can usually be averted by shaking both lots of bees out in front of the entrance of the permanent hive they are to occupy. Shake one frame from one hive and then one frame from another, and so on. This very act of shaking and disturbing will have a strong tendency to cause the bees that are moved to stay in their new location like a natural swarm; in fact, we would usually recommend uniting in this way, especially if it be in the fall.—ED.]

### Bees Kept in a Cellar Adjoining a Furnace.

December 23, 1909, I placed 31 colonies of bees in my cellar, and took them out last spring, on March 23, without the loss of a single colony. In May I looked them over carefully, and found every thing in excellent condition, which I think speaks well considering our cold Wisconsin weather. I have been experimenting for several years on the problem of wintering indoors, and I believe I have an ideal cellar. I can furnish plenty of fresh air, and I also have a small pipe that runs through the cellar from the furnace, which I use in cases of extremely cold weather. The bee-room, being adjacent to the furnace-room, makes the air very dry, which I consider absolutely necessary.

Through the winter I leave the extracting supers on the hives, but place them under the brood-chambers rather than on top, for the bees prefer the upper story where it is warm, and they are never disturbed or made uneasy, as they are so far from the entrance. I use a cushion for each hive, 3½ inches deep, and filled with basswood planer-shavings. This cushion is so constructed that there is a half-inch space above the top-bars. A piece of ordinary wire cloth is used first, and then a piece of burlap above it to keep the shavings from rattling down on the combs, the purpose of the wire cloth being to keep the bees from gnawing the burlap. I use slats over the shavings. In the spring I also use this cushion to keep the brood from chilling, and find it a great protection.

Hartford, Wis.

F. R. BUCHANAN.

### Seventy Colonies Diseased with Paralysis.

I have read carefully about bee paralysis, and find my bees have all the symptoms of it. I have about 70 colonies, and nearly all have the disease. Some are bad, though none have died out entirely so far. The entire apiary is beginning to smell pretty bad. The honey-flow is practically over, and robbers are ready to make trouble. I haven't enough healthy stocks to take care of the brood from the diseased ones, nor to form nuclei to build them up with. Shall I sprinkle sulphur on the brood-combs and all until the disease is killed out, then unite two or three stocks, or put them on to super combs? I have plenty of them with lots of honey in them. Or is there a better way to treat them at this season of the year? What would you advise me to do? One bee-man advises me to let them alone till next spring; but I am afraid too many will die off.

Salinas, Cal.

W. O. KIRKPATRICK.

[The nucleus plan for treating colonies diseased with bee-paralysis is to be preferred; but if you have not enough healthy colonies with which to form nuclei, perhaps the only thing you can do is to use the sulphur plan. Requeening with vigorous stock sometimes effects a cure. After the sulphur plan is carried out you would undoubtedly have to do some uniting.—ED.]

### Heating Wires by Electricity for Imbedding Comb Foundation.

In heating the wire in a frame for imbedding it in foundation, what is the best voltage to use for heating all the four wires at once? I want to get a small transformer to do this work, and should greatly appreciate this information. What would be the flow of current (amperage)?

Clinton, Ia., Sept. 5.

C. S. FRITSCHER.

[This was referred to our electrical engineer, Mr. Eckart, who replies:]

It requires four amperes of eight volts to heat the four wires of a brood-frame for imbedding foundation. In case you heat only one wire at a time, it will require two volts. It is necessary, of course, to have all connections good, so that there will be no drop in voltage in any of them. We note that you are about to buy a transformer for this purpose, and will offer the suggestion that you use your lamp circuit, using a bank of lamps for resistance. If the voltage is 110 you could use a bank of eight 16-candle-power lamps or four 32-candle powers. We believe this would be much cheaper than the purchasing of a transformer, since the time that the current is in use is very short, and would amount to but very little, even at the highest commercial rate.—B. E. E.

### Blacks Store from the Sugar-cane while the Italians do Not.

Our main honey-flow and sugar-making are coincident in this island, so that bees have no reason for frequenting boiling-houses, and they do not. But in this locality there is an estate close by that begins cane-grinding months before the usual season. Because of the large number of wild blacks in this neighborhood I had decided to give over trying to keep my stock pure, but changed my mind suddenly this week, for I have been taking off my crop of honey, and I find that my Italians have stored beautiful honey while the greater part of what I have taken from the blacks and hybrids is cane syrup.

This circumstance adds proof to a claim that is made, namely, that Italians, only under famine pressure, will store product from raw sugar. I observed this peculiarity years ago when I fed with raw sugar, and found that blacks and hybrids came to it, but not Italians. To secure honey in this locality, with sugar-making going on out of the regular season, I must have Italians.

W. G. HUTCHINSON.

St. Joseph's Rectory, Barbados, W. I., Aug. 26.

### A Case of Propolis-poisoning.

In the spring my hands, arms, and face became poisoned. Supposing it to be from ivy or some similar source I applied salt and soda and water; but this did not have much effect in curing it. Then I contracted an additional dose of the poisoning after handling the supers and cleaning out the house, and this convinced me that it came from



something about the bees—undoubtedly the propolis. My eyes swelled almost shut. I went to a physician. He did not give me much encouragement nor any help. I painted myself with iodine, which killed the poison but left the skin very sore. I was poisoned again; went to another physician, who fixed me some salve and gave some carbolic acid, with instructions to use it in a weak wash. I applied these with salt and soda, and killed the poison, but my skin was almost raw. I noticed that the carbolic acid had a soothing effect. Continuing to get poisoned I talked with a bee-man about it, who advised the use of red precipitate (very poisonous). I used this and the poison was killed, but that, too, left my skin sore. I began applying the carbolic wash, increasing its strength until I used a teaspoonful of carbolic acid to about a teacupful of water. This wash stopped the burning and itching, killed the poison, and at the same time left the skin in normal condition. I am using the wash exclusively. My hands, wrists, and face have become immune to the poison; but other parts of my body are susceptible to it, the poison going through my clothing. C. R. PARKER.

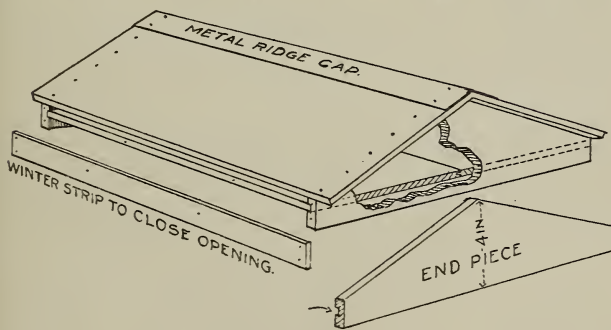
Plateau City, Colorado, July 23, 1910.

[We have had active editorial charge of this journal for twenty-five years this coming December. For nearly ten years prior to that time we had been, more or less, in close touch with its pages. During the whole period of nearly thirty-five years we do not remember reading of any other case where poison of the kind mentioned was traced to propolis. Even in this case we are inclined to believe that the cause is due to something else. However, let the truth come out. If any of our readers have ever experienced a like trouble, we should be glad to have them report. In the case mentioned it would be possible for the propolis to be gathered from some poisonous plant or tree, and just possible, also, that you might be very susceptible to the action of that poison, whatever it might be.—ED.]

#### A Gable Cover Protected by Paper.

An important part of a good hive is a cover that will be cool in summer and warm in winter. Of course, if one winters indoors it does not make so much difference. But most of the bee-keepers around here winter outdoors and take but little care of their bees at that.

I like the flat paper-top cover quite well, and always order it, but prefer a cover made like the one shown herewith. I have used several that I made



myself, and like them better than any other cover for a single-walled hive. The inside (flat) part can be made either of two or three pieces. The outside (top) should be of two pieces if the ridge is narrow, but can be made of four pieces if the whole top is covered with paper. The outside should project over the ends 2 in., or 1½ in. at least, and fastened with several small nails. If the whole top is covered with paper there will never be any trouble from the ends of the boards splitting. I have had no trouble from this cause. A strip of sheet metal can be used for the ridge-cap, or roofing-paper will do if nailed with tacks.

Mystic, Ct.

ELMER E. WAITE.

[The design of your cover is excellent if it be covered with paper or metal; but such a scheme of making a cover when only plain boards are used will not work. The gable boards will check or

split at the nails. This is due to expansion and contraction, as the result of varying conditions of weather.—ED.]

#### Catching Chickens that Roost in the Trees; Flying-machines, etc.

Mr. Root:—You spoke of the difficulty of getting chickens out of the trees in Florida. I have used a very convenient device. Mr. McClave uses it a great deal. Take a piece of wire, one or two feet long. Insert it in a cane fish-pole. Bend the wire as here shown, and then you can catch your chickens very easily, even if they do roost twenty feet or more above the ground. Try it.

In speaking of the Wright brothers using spruce timber in their machines, I think that willow is the strongest and lightest wood we have. I have used a good deal of it for things that require very little weight but a good deal of strength. I have used it for ladders ten to fifteen feet long.

Now one thing more. I have said to my friends that I hoped Mr. Root would not risk his neck by going up in one of those machines. This world is not ready to spare him yet.

We expect to start south this season about Nov. 1. We will locate for a time, at least, at St. Petersburg.

New London, O., Sept. 23.

W. C. GAULT.

#### Another Plan for Introducing a Queen to a Laying-worker Colony.

I am a beginner with bees, and I have been troubled with laying workers. I have only one hive, and so I was precluded from getting rid of the laying workers by the method recommended in the A B C, i. e., scattering the bees round in other hives. While in this quandary I saw the plan suggested by Mr. Hartl, page 534, August 15. Mr. E. S. Hopkins, of Jeffersonville, Ind., who is helping me in getting started with bees, suggested a modification of that plan, and with the said modification, the plan worked to perfection. We took an empty hive and put in it two frames with comb foundation. Between the two we put the queen in the introducing-cage as she came to us through the mail. We put this hive on the stand of the old one which had the bees in it, and then put the old hive on top of the new, the two being separated by a heavy mat and a wire screen. We made an entrance to the old hive in the back, and over it put a bee-escape. We then left the hives alone for five days, when we again opened them. Practically all the bees were down in the new hive. They had accepted the new queen, which had started laying. We then transferred the frames of brood from the old hive to the new one, and since then every thing has been going all right. I am feeding the bees now to get them in good condition for wintering. I write this to you as a suggestion for some one else who may be in as bad a fix as I was, and as an endorsement of the plan of the gentleman from Texas. RICHARD P. DIETZMAN. Louisville, Ky., Sept. 17.

#### Common Law as Affecting Swarms Found on the Property of Another.

We have found a colony of bees in a small telegraph-pole along our own land. Can you inform me as to my right?

Mt. Carmel, Ct.

OWEN NOLAN.

[Under the common law the bees are the property of the one who discovers them; but such person can not go upon the property of another without the consent of the owner. From a legal point of view you would have to obtain the consent of the telegraph company; but for ordinary purposes we think it would be perfectly proper for you to climb the pole and take the bees without asking any odds of any one. Surely a great telegraph company would have no objections to your going upon its premises and up on its pole and removing some-

thing that is of no value to it, and possibly might prove an annoyance.—ED.]

### When to Prepare Bees for Winter.

In July a swarm came off, the bees of which have been doing well so far as honey in the brood-frames is concerned; but they have done nothing in the super, which I put on the first week in September, although we have had a good honey-flow from buckwheat and goldenrod.

Why do the bees cluster out in large bunches on the front of the hive late in the evening? At this time of the year it is wet and damp, though not very cold.

What time in Northern Pennsylvania is it advisable to place the colonies in winter quarters?

What hive do you consider best for outdoor wintering in this part of the country?

Wheelerstown, Pa. MRS. SUSAN E. ALLEN.

[It is hard to state why your bees did not work in the super; but it may be that the swarm was not a very large one, and that it took most of the flow for the bees to build up in good shape. However, your bees got started to storing in the brood-combs; and when there is still room in the lower part of the hive it is difficult to get them to store the honey in the super, as they prefer to keep it near the brood.

Clustering out as late as this is rather unusual, and indicates a lack of ventilation when all the bees are in the hive, as in the evening. A larger entrance would probably be better for such a large colony.

It is best to begin early to get the bees in shape for winter; and any time after you can be sure that there are enough stores in the hives, the packing can be done. It is often unsafe to pay no more attention to a colony after an examination early in the fall, for the reason that brood-rearing may start up again later in the warm weather that generally comes, so that the stores are partly used up. For this reason it is not best to pack single-walled hives so that no further examination can be made, until after this period.

We believe that the ten-frame chaff hive gives the most uniform results for outdoor wintering in most localities.—ED.]

### \$700 Profit from a Back City Lot.

Last year the bees in this locality did little or nothing, many people getting scarcely enough to winter their bees; but this season has been very good, with the exception of winter losses. A great many apiarists lost a very large part of their bees. One very scientific man, to my knowledge, went to winter with 80 colonies, and came out in the spring with but 7, having wintered on summer stands. I had very good success with mine, wintering in the cellar and not losing a single colony, but paid for my experience two years ago, having put 32 colonies in the cellar and coming out with 8. I started this season with 32 colonies, some of them rather weak early in the spring. March was an exceptionally fine month here, however, and I built them up very rapidly. I succeeded in harvesting 30 cases of fine comb honey and 320 gallons of extracted. I sold all my comb honey at \$4.00 a case, and have sold half of my extracted honey at \$2.00 a gallon. I am confident of a net profit of \$700 from 50 ft. square in the back of my lot.

Omaha, Neb.

H. C. COOK.

### A Sour Smell Coming from the Hives.

I am puzzled by a peculiar odor from my hives, which is so sour that one can detect it several feet away. All of the colonies seem to be affected alike. This odor has developed only in the last two weeks. I have examined very closely, but can find no dead brood. The queens are laying some, and the hives are full of honey. I got a surplus of from 40 to 88 lbs. of fine white comb honey from the hives. This would seem to indicate that the bees were free from disease during the honey-flow, which ceased about August 20.

Wilksburg, Pa., Sept. 26.

F. D. MILLER.

[If you make investigation you will undoubtedly find that the sour smell comes from some fermented honey in the combs. Your bees have probably been bringing in something, perhaps not nectar from the flowers, which sours quickly, owing, possibly, to its nature, or to peculiar weather conditions at the time. It would probably be best to extract all the honey in the combs, and substitute su-

gar syrup. It may be that only a small part of the honey is soured, and that the rest is all right; but only an examination would reveal whether this is true. Since there is no dead brood at all in your hives, it is unlikely that the sour odor is due to any disease.—ED.]

### Sealed Covers versus Oil-cloth Quilts.

When I prepare my colonies for winter I intend to put a super-cover on the single-walled hive, with a superful of chaff over it, and then tie burlap around the hive and finally push a box or winter case down over the whole thing. Do you think oil-cloth over the frames would be better than the super-cover?

How much sweet-clover seed should be sown to the acre?

Mineral Ridge, O.

JOHN WAGGONER.

[If you use oil-cloth over the frames you should use a few sticks laid crosswise of the top-bars under it so that there will be a bee-space above the frames. The oil-cloth is not porous, so that the results would probably be about the same as with the use of the super-cover.

Different amounts of sweet-clover seed are sown to the acre. Notice that Mr. E. S. Hacker, page 658, this issue, sowed only 10 lbs. of the seed on a plot of ground comprising about an acre and a half. However, R. L. Snodgrass, Augusta, Kan., advises not less than 20 lbs. of the unhulled, or 12 to 15 lbs. of the hulled to the acre. For further particulars see "The Truth about Sweet Clover."—ED.]

### A Hive-cover that will Not Crack nor Check.

I use a single board as wide as the hive, and 1 3/4 inches longer. On both the upper and under side of each end I place two cleats as wide as the board, and 7/8 inch square, driving one nail in the center through the upper cleat, down into the cover, and also the lower cleat. To the ends of these cleats I nail a piece of galvanized iron, 5/8 inch wide and 2 1/2 inches long, using three five-penny nails—one in each cleat and one in the cover, the latter nail keeping the cleats in the proper position. This cover will never crack with the sun if it is well painted; for, as the board shrinks, the nails on the sides allow it to give.

Los Angeles, Cal.

T. ARCHIBALD.

[In your State you would not have much difficulty in getting lumber wide enough for the hives; but in most localities one-piece covers are too expensive, owing to the high price of such wide lumber.—ED.]

### Questions about Auto Buggies.

I have noticed pictures of autos and auto buggies in GLEANINGS. I want to ask you if you know how high are an auto buggy's wheels. Does the Auto Buggy Co., of Norwalk, O., have any catalog?

Java, N. Y., Aug. 15.

D. M. BUCK.

[The high-wheel buggy type of automobile has wheels about 42 inches high. Some machines have them as high as or higher than those on common buggies; but the usual tendency is to have them a little lower. The Auto Bug Co., of Norwalk, O., issues a regular catalog, as does the International Harvester Co., of Akron, O. Both of these concerns make a specialty of buggy type of machines that are especially fitted for going over rough roads and in deep mud.—ED.]

### Requeening would Cure the Disease among Catherine Beattie's Bees.

On page 516, August 15, I notice E. F. Robinson's comment on Catherine Beattie's bee disease. Five years ago Anson S. White, of Cowyche, Wash., had bees with the same disease. I, as inspector, advised requeening, which he did with success, as he has had no trouble from the disease since then.

JESSE W. THORNTON.

North Yakima, Wash., Sept. 5.

### Chickens Eating Bees, etc.

We are having no more trouble with the sore-head. The chicks are doing well. We are having fine weather. When it gets too cold up there, come down home once more.

A man who will let chickens eat bees, as Mr. Brown admits doing, p. 598, Sept. 15, deserves criticizing. If no one does it better, give him my opinion of it.

Bradentown, Fla., Sept. 24.

D. W. ABBOTT.



## Our Homes

By A. I. Root

And Adam called his wife's name Eve because she was the mother of all living.—GEN. 3:20.

Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children.—GEN. 3:16.

Favor is deceitful, and beauty is vain; but a woman that feareth the Lord, she shall be praised.—PROV. 31:30.

In the introduction to the A B C book, brief mention is made of my paying \$20.00 to L. L. Langstroth for a queen. Below is something further in regard to that transaction. I copy it from the *American Bee Journal* for May, 1867:

Well, as I had got the Italian-queen fever I was bound to have one; \$20 was a big price to pay for a single bee. As my friends expressed it, but I thought that in bees as in other things the best was generally the cheapest and surest; and so away goes the \$20 greenback with an anxiety and impatience for the result not equaled by any other transaction where several hundred were at stake.

The days at length passed as days always do, I believe, and a reply came, and, shortly after, the tiny movable-frame hive, and the beautiful little strangers as kind and gentle as kittens.

At first, great preparations were made in a room on purpose to open the little hive before a window, as we supposed of course they would fly, but not a bee moved off from the combs; they were taken out and looked at, handled, caressed, and even *breathed* upon, without stirring a wing, and the retiring modest little queen, with her beautiful tapering form, was already worth the \$20 just to look at.

Great was the fear that that important ceremony of introduction to the black natives might miscarry in some way, and over and over again were the instructions read before commencing.

After six hours the Italian queen was placed in a cage on the frames, and, at the proper time, as the cage was opened, my heart stood still, and so did the bees; and as she silently disappeared between the combs I drew a long breath of relief, for I knew that my *highly esteemed* \$20 queen was safe.

I think I have before remarked that never in my life did I make an investment that brought me more satisfaction and profit than that \$20.00 I paid for my first queen. There was much sport and merriment here in Medina when it was noised all over town that I had paid \$20.00 for just one little "bug." But that one little bug became the mustard seed that started an industry now known all over the whole wide world. Please excuse me if I remark right here that the goods our company sent to bee-keepers during the past season amounted to over half a million dollars; and many of them have gone to the "utmost parts of the earth." Now, why was it that that speculation was a wise one? How did it come that I could *afford* to pay out of my scanty means at that time such a sum of money for just one little insect? How does it come that our rural friends can many times afford to pay big prices for choice domestic animals? Well, the secret of the whole business I have just been talking about is that this queen was a *mother* bee. If you turn back to that old *American Bee Jour-*

*nal* you will notice that, after many narrow escapes, I succeeded in preserving her alive through the winter, and in the spring I proceeded at once with boyish enthusiasm to raise queens enough to make quite an apiary. There was no Italian blood at that time in this vicinity. In fact, very few Italians, comparatively, were to be found in Ohio, nor in the United States, for that matter. As the result of my enthusiasm (which kept up day and night, winter and summer, for many a year) the progeny of that \$20.00 queen was scattered far and wide. When I started out amid much opposition to raise dollar queens, and advised others to go into the business, no one can tell how many *tons of honey* were the direct result of that one purchase.

One reason why so much value centers in a queen is that, when you go into bee-keeping, you do not need to buy a pair or a trio, as you do with poultry. You simply purchase a mother bee—one that has already met a drone, and you could take her out on an island and *people it* with her progeny.

Well, this Home paper is not going to be about bees nor poultry. My subject is the *mothers* of the human family—perhaps the mothers of *American* sons and daughters particularly. Are we, as a people, looking after the welfare of the mothers, on whom so much depends? Our first text tells us that Eve was so named because she was the "mother" of *all* living (like the queen bee I have been talking to you about) and perhaps we may stop and consider right here the terrible *calamity* that fell on all humanity from that time up to the present, *because* this mother of the human race was indiscreet, to put it mildly, in listening to the voice of the serpent. May the Lord be praised that, through the gospel of Jesus Christ and his teachings here on earth, all motherhood has been elevated and raised up since that first terrible fall. But the serpent is *still* among us or we should not have the divorces that threaten just now to be worse—yes, a thousand times worse—than smallpox or cholera, because mothers are *still* not only listening but permitting themselves to be *beguiled* by the serpent.

Forty-five years ago I took pains and spent considerable money to protect that one precious queen during the winter. A few days ago a gray-haired mother—a mother in Israel, I am glad to say—told me of an old silver watch that her husband, who is now dead and gone, bought of me for \$48.00. The watch is still doing good service, one of the first American watches. But why talk about watches in connection with mothers? Well, she said further, "Mr. Root, my husband paid you for the watch with eight colonies of bees; and you purchased those eight colonies of bees so as to be *sure* to winter over that \$20.00 queen."

From the above you will not only see that I paid \$20.00 for the queen, but when the colony where I placed her had almost "petered out" as the result of experiments I invested \$40.00 more in bees to preserve and

prolong her life. My friends and neighbors at that time thought it was a sad thing to see a good business man going crazy over bee culture. But now let us get back to the mothers. I invested all this time and money in that one queen because she was the mother I expected to rear a large family from. May be, however, *she* did not expect any thing; but I tell you *I* did. I built big air castles all that winter about what I was going to do with her. Well, if it paid me to invest so much time and money to take good care of that one queen, how much more will it pay us—you and me, friends—to take the very best of care of the “queens” in our homes especially. Dear brother and sister (and I wish to include the whole wide world in what I am going to say), for God’s sake let us take the best of care the world can give of the wives who are *approaching motherhood*.

Our second text tells us of the terrible burden laid on poor weak women’s shoulders—the burden of motherhood. And this is a burden that can not be escaped. We all laugh about the folly of the fellow who filled a hollow tooth with dynamite; but before he applied a match he recollected he could not *run away* from it to a place of safety. My illustration is a poor one, but it may help us to comprehend how the poor mother is *chained down* to her burden. She *must* meet the crisis and endure the pain and sorrow. There is no escape except through crime, and a terrible crime, too, against both God and man. Of course, there is such a thing as escaping the pangs of motherhood by having no children at all; but the older I grow the more I am impressed that this, too, is a sort of crime in God’s sight if not in the sight of man, and a sin that brings its own punishment. How many times do we find otherwise happy homes where there are no children! When Mrs. Root and I formed a partnership and started in life together, we planned to have several years together without children; but God, in his infinite love and wisdom, as I have before told you, sent little prattlers stringing along until there were five of them. Now, where would The A. I. Root Co. be to-day had we been permitted to have our own way in the matter? and where would have been the nine beautiful grandchildren that are the delight of our lives every day in the week? When I saw three baby girls on the street a few days ago, that in my eyes were as beautiful children as the world ever produced,\* and when I re-

flected that they were not only my own flesh and blood, but also flesh and blood of the dear woman whom I love now more than any thing else in the wide world—yes, I might almost say more than *all* else—my heart bounded with such a thrill of joy and thanksgiving that I felt like breaking out with a good old-fashioned Methodist shout of praise. For heaven’s sake, dear reader, do not think of planning or even *wishing* for a “childless home.” If you are not already married, get about it; and then as soon as circumstances will permit, help our nation to avoid “race suicide.” People the world with godly and God-fearing people in order that we may have a better chance to stem the rising tide of evil. Take care of the mothers and then take care of the children. In spite of all that has been done during the past hot summer to save the lives of the little ones, I find this sad record in a recent issue of the Cleveland *Plain Dealer*:

#### ALL DEATH-RECORDS BROKEN.

All records for a single day’s deaths were broken in Cleveland yesterday when the health-office statistics showed fifty-one mortalities.

Of the total, twenty-two were children under one year old, while four more were less than two years. The health-department officials, while not blaming the hot weather directly for the unusual death-roll, believe that it was largely responsible, since most of the children succumbed to cholera infantum.

Never before in the city’s history has a day’s death-roll exceeded forty-one.

That we may have a better chance to save these children after they *have* come into our homes, let us give every possible aid to the *mothers*. There is no doubt that thousands of infants have gone into their little graves because the mothers did not have the means to care for them properly—especially the mothers’ homes where the father was a drinking man, and, under the influence of liquor, burdened the poor mother with infant after infant *more* rapidly than God designed. No wonder that such children go to the bad with a handicapped mother, and, worse still—yes, a thousand times worse—with a vicious disposition that was inherited from a drunken father. Lord, help.

I am now coming to the point of my whole talk. Why should not the mothers of our land have a voice in making our laws, in voting on the disposition of public money, and deciding whether a saloon shall be planted near the home, and a thousand other questions? Drunken men, or at least drinking men, are permitted to vote. Many times they vote wet, when, if sober, they would vote dry. The drunken father can vote, but not the sober and godly mother of the children. Unless I am mistaken, an ignorant, drunken, and vicious *negro* can vote, but not the ablest and best-educated woman

\*Little Katherine, Huber’s baby, is just learning to walk. They thought it best to hold her back a little rather than to encourage her in walking too soon; but just now they have decided that she is old enough and strong enough to go ahead. She was out on the walk in the sunshine, and her grandmother was her teacher. She became so excited about it that she ran back and forth till she was almost out of breath. When I put my hands out toward her she came to me with a rush; but when I attempted to hold her so as to give her a little rest, and help her recover her breath, she kicked and wiggled to get down on the ground again, and once more test this new and novel method of locomotion. It made me think of the young birds when they test

their wings for the first time; and, later still, of the Wright brothers’ students with their flying-machine. What opportunities God in his infinite love and wisdom has placed over us all—first to creep, then to walk, and finally to swim, run a bicycle and automobile, and last, but *not* least, to soar aloft in the blue dome of heaven! As we go to press, some aviating students have succeeded in reaching an elevation of more than two miles in the air. What is coming next?



in our land. A woman who has, perhaps, a family of bright children, may know what is wanted in managing the affairs of the nation as well as her husband does, *because* she is a mother.

Now, with this preface I want to give you the contents of a leaflet that the author, Miss Genevieve Blair Sackett, a beautiful, bright, and talented woman, placed in my hands. Miss Sackett was called to deliver an address at our church on the 25th of September. The Ohio W. C. T. U. placed her at the capital of our State, and authorized her to look after the interests of the mothers in the affairs of the government.\* She has the hearty indorsement of the Ohio Anti-saloon League. Just before her address she handed me a little tract; and after I read it over she confessed (when questioned) that she was the author of it.

#### PROBLEMS IN AMERICAN POLITICS.

Why do we build reformatories, jails, penitentiaries, poorhouses, and orphanages, and license the liquor-dealers to furnish the inmates for them?

Why do we maintain a strict national quarantine against idiots, paupers, insane, and criminals from abroad, and license 250,000 liquor-dealers to manufacture the same brand of human wreckage at home?

Why do we levy taxes to support orphans and widows, and license the murder of husbands and fathers? There are 865,000 whisky-made orphans in the United States. Why, Mr. Voter, why?

Why do we maintain 275 life-saving stations at an annual cost of one and a half millions, and at the same time license 250,000 life-destroying stations at a cost of two and a half billions?

Why do we license the destruction of untold millions? The liquor industry is the only inverted industry we have. Other industries build wealth of the nation by taking a raw product and turning out a finished product worth five or ten times as much. The liquor industry takes the raw product, *boys*, and turns out the finished product, thieves, murderers, degenerates, insane, and imbeciles. It costs approximately \$2400 to clothe and educate a boy, and we license the destruction of one boy out of every five.

Why do liquor-dealers have more direct influence in politics than educators? Is it, as one of our greatest statesmen has recently said: "Because the nation spends four times as much for liquor as it does for education?" Is it not rather because one-half of our citizens are disfranchised, the half comprising citizens whose votes could not be bought nor controlled? Why not let the women vote?

Why should not the paramount business interests which are diametrically opposed to the liquor business be given consideration by our voters and lawmakers? The money invested in breweries, distilleries, and saloons in the United States is small compared to the money invested in farming, manufacturing, merchandising, and transportation. Take away our railroads, and our cities languish; manufacturing and merchandising are soon at a standstill; take away our farms, and the people perish from lack of food; but take away our saloons, and the health, happiness, longevity, and prosperity of our nation are increased tenfold.

Why not let the more than twelve million mothers in the United States answer at the ballot-box which we shall conserve—our *breweries* or our *boys*? Before the civil war a heavy penalty was imposed for furnishing liquor to a slave boy (who represented an investment of several hundred dollars) on the ground that it impaired his usefulness and was a willful destruction of property. Are not the boys of to-day as valuable as the slave boys of the past century?

In a period of government by graft and politics by purchase, why not enfranchise the class repre-

senting most largely the honesty, morality, and intelligence of the nation? Ninety-five per cent of our criminals are men, and only five per cent are women.

Why not let the American women vote? Women vote in Australia, New Zealand, Finland, Norway, Russia; and in Bombay, Hindoos, Parsees, Mahometans, Eurasians, Roumanians, Japanese, and Jewish women voted this year. Even the veiled women of Bosnia, in northwestern Turkey, have been granted the right to vote, and that by Mahometan men, while the American men, the best the sun ever shone on, refuse to take into political partnership, American women. Every vested interest is represented at the ballot-box but the mothers' interest.

Why not let the twelve million and more mothers in the United States vote?

Why not let the 300,000 women school-teachers who have educated the nation vote?

Why not let the 980,000 women in agriculture, who are helping to feed the nation, vote?

Why not let the 1,315,890 women engaged in manufacturing vote?

Why not let the 6,500,000 wage-earning women vote?

Why do we build battle-ships at a cost of from six to twelve millions each, which in a few years will be thrown upon the junk-heap, to defend us from enemies that never appear and wars which rarely threaten, and at the same time appropriate a paltry \$50,000 to investigate the white-slave traffic which destroys more lives than all our wars and pestilence combined? Why not protect the daughters of our nation from the war upon humanity which exists within our borders?

WHY NOT LET THE WOMEN VOTE, THAT LONG-DELAIED JUSTICE MAY COME AT LAST TO EACH AND ALL? THAT TRUTH, PURITY, HONESTY, AND TEMPERANCE MAY TRIUMPH? THAT UNIVERSAL WELL-BEING MAY BE THE LAW OF THE LAND IN A NATION WHICH RIGHTEOUSNESS EXALTEETH, AND WHOSE GOD IS INDEED THE LORD?

I will only repeat, in closing, what the good lady says in the above—"why not let the women vote?" Or if you can not let all the women vote, for heaven's sake let us permit the *mothers* to do so. "With all the burden that God and our nation have placed on her shoulders, are they not entitled to some sort of representation in the affairs of our great public?"

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Now as Jannes and Jambres withstood Moses, so do these also resist the truth; men of corrupt minds, reprobate concerning the faith. But they shall proceed no further; for their folly shall be manifest unto all men as theirs also was.—II. TIM. 3:8, 9.

Perhaps I should apologize for taking so much space just now with clippings from our local press; and were I not convinced that this same state of affairs is going on more or less all over our land, I would not do it. While it is true many States and many counties are being rapidly made dry while the adjoining locality is wet, this fearful work of breeding criminals and crime goes on. Just as our Home paper for the last issue was on the press the following appeared in the *Cleveland News*:

HELL-HOLES THAT SHOULD BE ABATED; ROCKY RIVER AND ITS EVIL RESORTS A DAILY MEN-ACE TO HUMAN LIFE.

This latest suburban crime, ending in the ignominious suicide of a wealthy Detroit business man in the bull-pen of the county jail, was not needed as an illustration of the short and sure way that leads from honor and usefulness through taxicab rides and roadhouse suppers to disgrace and shameful death. It was a typical instance, to be sure, swift, sensational, and complete. But the moral is so familiar as to go without saying.

\*She was Legislative Superintendent at Columbus all last winter; and is at present president of the Lorain Co. W. C. T. U. Her address is Elyria, Ohio.

Yet the Yates attempted murder and accomplished suicide assert with emphasis a fact long recognized hereabout. Rocky River and its roadhouses are a disgrace to this whole community. More than that, they are a menace.

Not many days ago, according to the confession of one of the youths involved, two men loaded themselves with liquor at roadhouses in the neighborhood, and started out to rob anybody or everybody they encountered on the highways, finally murdering a market woman as she was driving home to Rockport with her husband and child. The confession of the one murderer who was caught contained many such statements as these:

"Then we went to Fischer's place at the Rockport club and had more drinks."

Or, "We went to a saloon at Kamms Corners and had more drinks."

The two murderers, according to the confession, had drinks at city and suburban saloons designated as Kundtz's, Upham's, Nau's, the Mushroom, and so on. Then they felt inspired to burn barns, steal horses, shoot at passing vehicles, and murder a woman.

Yates, would-be murderer, had been "drinking heavily." The woman whom he shot twice with murderous intent is said to have toured the roadhouses with him. At White's roadhouse in Rocky River, where the crime was committed, they were served drinks at 3:40 A.M. The witness who testifies to this circumstance is a deputy marshal of Rocky River village, one Timmerman, and according to his own story he did not interfere until after the drinks had been served and Yates had emptied his revolver at and into the Singer woman!

Rocky River, with its roadhouses and poolrooms, has long been a stench in Cleveland's nostrils. County officers have raided its resorts repeatedly, and repeatedly its unlawful practices have been resumed. Law enforcement seems to be regarded by the village officers as a joke. They attempt to conceal crime.

Other suburban communities may be lax in such matters. The roadhouses where the Rayner murder was incubated were, perhaps, not those of Rocky River itself. But this village has well earned its evil eminence among Cleveland's suburbs, and its ill repute is the more intolerable because of its proximity to such ideal residence districts as Lakewood, Oakwood, and Clifton Park.

It is not to be believed that all or most of the citizens of Rocky River are evil-disposed persons who find pleasure or profit in law-breaking, or relish their municipality's bad name. Probably most of the voters of the village have been indifferent rather than culpable. The Ohio Statutes offer them every opportunity to show their respectability by voting their notorious resorts out of existence.

If Rocky River fails to redeem itself by electing officers able and willing to enforce the laws, interference from outside should not be delayed much longer. Negligent or incompetent municipal officers can be removed. County officers can enforce laws when local officers fail. Cities are authorized to exercise police power, when necessary, outside their boundaries. Rocky River has been endured as Cleveland's hell-hole long enough.

*Amen* to the concluding paragraph from the above.\*

#### Roosevelt and Lorimer.

May God be praised that we have at least a few men who stand in high places before the people who refuse to have fellowship with grafters. Recently Roosevelt was invited to be present at some banquet where Senator Lorimer (see p. 599) was also to be present; but, of course, this created havoc in the Republican camp; and finally the following telegram was sent to Lorimer:

Col. Roosevelt positively declines to sit at the same table with you. Our invitation to you for this evening is therefore withdrawn.

\*By the way, I looked over the number of the Cleveland paper containing the quotation above very carefully, and I can not find a single advertisement of liquors of any sort.

Once more may God be praised that the time seems to be coming when good men will refuse to sit down at the same table with a grafter.

The following, which we clip from the *Commoner*, is W. J. Bryan's opinion in regard to Roosevelt's conduct as above:

Some may be inclined to question the good taste of Mr. Roosevelt's refusal to dine with Senator Lorimer at the Hamilton Club banquet. Mr. Roosevelt's action was indeed extraordinary, but it is probable that the American people will overlook the question of taste in recognition of the distinct public service Mr. Roosevelt rendered when he gave emphasis to the fact that men who profit politically through bribery are not fit for the society of honest men. It is quite true that Senator Lorimer has not been convicted of actually paying bribes, but the evidence that some one purchased votes for him is so complete that, regardless of the verdicts of juries, the public mind is convinced.

And finally we have on the pages of Holy Writ, authority for Roosevelt's decision. See below:

I have written unto you not to keep company, if any man that is called a brother be a fornicator, or covetous, or an idolater, or a railer, or a drunkard, or an extortioner, with such a one, no, not to eat. —1. Cor. 5: 11,

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#### AN AUTOMOBILE THAT COSTS BUT LITTLE IF ANY MORE THAN A GOOD HORSE AND BUGGY.

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Our older readers will remember that I had one of the first bicycles (a velocipede) that ever came into the State of Ohio. They will also remember that I ran from Medina to Traverse City, Mich., with one of the first automobiles—an Olds runabout; and my write-ups on the automobile and the automobile industry since then would make quite a book. But of late Ernest has done most of the talking on automobiles; but I am ready just now, after having had quite a wide experience with machines of different makes (each of the five different members of our firm has an automobile of his own) for another automobile talk.

In the first place, although I admire the two and three thousand dollar machines, I would not want one for my own use. In fact, if somebody would make me a present of a \$3000 machine it would put me in a bad predicament. My conscience would trouble me every mile I rode in it because of using so much treasure here on earth that might be used for treasure laid up in heaven—to give to foreign missions, for instance, or fighting the rum-traffic here at home. My first Olds runabout that I have been using for six seasons, and that has carried not only two people but four and even more over thousands of miles, is, as a natural consequence, getting to be old and infirm, and we need a new one in our Florida home. What shall it be? Our children suggest a thousand-dollar machine; but neither Mrs. Root nor I feel like using so much money for that purpose. Day before yesterday Huber and I took a trip of about thirty miles to see a machine made by Sears, Roebuck & Co., of Chicago, that costs only \$395. They make a machine for only \$370; but



this one has a very pretty top, and costs only \$395. The man, Mr. Jacob Gesaman, of Canal Fulton, O., has had the machine over a year. As he is a bee-keeper, in the winter time he puts it in the shop, removes one of the hind wheels, and puts in its place a pulley, and runs machinery for making bee-hives and doing various kinds of carpenter work. He runs it up hill and down, through mud and sand; and there are some hills, let me tell you, in the vicinity of Canal Fulton, Stark Co., O.

Now, one thing that commends this machine to me besides its cheapness is that it has no water-tank and other machinery to keep it cool. It is air-cooled. Secondly, there is no *gearing* about the transmission. There is not a cogwheel to rattle and get dry in the whole machine. Last, but not least, it has solid cushioned tires instead of pneumatic ones that have made and are making so much trouble and worry by puncturing and patching. Just think of it, friends, you who have had some experience with automobiles. No water is needed; no tire troubles, and no gear to rattle where you can not get at it. To make a good thorough test of the machine, Mr. Gesaman took Huber and myself (three good-sized persons) on a twenty-mile trip after dark. We made this trip easily inside of two hours, taking in a good many quite bad hills, and passing a dozen or twenty teams after dark; and as the road was new to all of us, Huber had to get out every little while and strike a match to look at a guide-board. It is true the machine does not run as still as some of the higher-priced ones; but we passed horses and buggies with very little trouble, and ran the machine right close to them. It is true, also, that there is a little more jarring with the solid tires than with the pneumatic; but after riding about thirty miles the same day with one of the best pneumatic, I rather preferred my twenty-mile ride on the cheap machine. The slight jar in running rapidly gives my blood a better circulation than the more luxuriant and high-priced car. Last, but not least, the entire expense for repairs on this \$395 auto car, although it has been run every day more or less, was less than \$10.00. The expense for gasoline is, as nearly as he could figure, one cent a mile.

Just let me give you right here a suggestion about lubricating-oil; and, by the way, the air-cooled machines require rather more lubricating-oil than the water-cooled ones. Well, with the machine he got of Sears, Roebuck & Co., five gallons of oil cost 30 cts. per gallon; and this oil would run the machine a month without cleaning the spark-plug. After he had used up the five gallons of oil he purchased some more at 50 cts. per gallon near home. This last was so poor that he had to clean the spark-plug every day or two; and it did not give nearly as good results even then. Be careful about your lubricating-oil; and perhaps it would be better to get it where you get your machine. When he made his purchase his

brother got a second machine just like it; and his brother's machine has done just as good service as his own. Both are used almost daily. I suppose I hardly need say to the readers of GLEANINGS that any thing that comes from Sears, Roebuck & Co. is *sure* to be satisfactory. Lest you may think I am interested in the sale of their machines, permit me to say they know nothing about what I am writing; and I can not remember that I have ever given that house a single order; but so many of my friends, and those who write me letters, have mentioned this Chicago house favorably, I know something of their ways of doing business. I am so well convinced that these low-priced machines will be a great boon to bee-keepers, and hard-working people of moderate means in general, that I have taken the liberty of making this write-up.

From the above you can learn something about what it costs to run one of these cheap automobiles. Now go to work and figure up what you pay out on horse, buggy, and harness, in the course of a year, counting the cost of furnishing the feed and caring for the horse when you do not need to use it, and see if I am not right about it—that the auto buggy is the cheaper of the two.

On page 601, Sept. 15, I made mention of the fact that the great establishment of Sears, Roebuck & Co., is on the side of temperance. In answer to an inquiry in regard to the matter I received the following:

*The A. I. Root Co.*—We do not allow liquor on our premises. Our firm is opposed to liquor in every way, and it is one of the strict rules of our institution that our people must not enter saloons any time during the twenty-four hours, within eight blocks of our plant. That makes a prohibition district about a mile in each direction for our employees.

We do not attempt to prescribe for our people what they shall do outside of business hours; but we do insist that no one working for us shall enter a saloon, day or night, within eight blocks of our plant.

SEARS, ROEBUCK & CO.

Chicago, Sept. 30.

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#### FEOM CHICAGO TO SPRINGFIELD BY FLYING-MACHINE.

The Chicago *Record-Herald* for Sept. 30 gives a thrilling account of the above \$10,000 flight by Walter R. Brookins, one of the Wright brothers' youngest students. The *Record-Herald* offered a prize of \$10,000 for the feat, and the 22-year-old "cloud-explorer," as they call him, fairly won it. By means of telegrams, telephones, and other means of communication, the whole flight was heralded so the people might come out of their homes by the thousands and tens of thousands, and witness the wonderful spectacle. Not only were the wires kept busy, but the locomotives and factories blew their whistles when he came in sight, so that everybody might get out and see him as he passed overhead. If I am correct he not only excels all his opponents in high flying, but also in long-distance flying. A special train containing Wilbur Wright and a host of friends started to race with him; but he

beat them at every point. He made three stops on the way; but had he not been obliged to wait for the coming of the train containing his gasoline with which to fill his tank he might have made the distance, 187 miles, with only two stops. At one time when the wind was strongly against him the train came pretty near getting ahead; but when this puff of wind let up a little he easily showed his supremacy, at this early stage of the invention of the flying-machine, over the locomotive. The papers call it "a new air-line through Illinois." Expensive railroad tracks and big bridges are done away with. With this new method of travel it is easy to make a bee-line (exactly as the bee has always been doing it) not skipping around the hills and mountains and following the twistings of rivers as land-transportation lines and railways have been doing. I did not notice any mention anywhere on the route of people singing "Praise God, from whom all blessings flow;" but it seems to me it would have been very appropriate.

His average speed, leaving out stops, was 33 miles an hour; and if I am correct the greater part of it was against head winds. At one place where he had to wait for the train containing his gasoline he threw himself down on the ground, boy fashion, and slept till the crowd with the gasoline woke him up. At one time he stopped in a cornfield. From the elevation at which he flew the cornfields looked like pasture lots; but the crowd soon cut the corn out of the way, and he started up out of the field without a particle of trouble. When he reached Springfield he ran up to a pretty good height and circled down like a bird; but the crowds were so great, ready to welcome him, that he really found trouble in finding a place to alight without endangering the lives of some of them.

The *Record-Herald* gives us not only a picture of the boy, but nearly a dozen other pictures of his machine, and of the crowds that gathered everywhere. A copy of the *Record-Herald* was sent us by our long-time friend Dr. C. C. Miller. If you wish to read the whole account, get a copy of that paper of the date mentioned.

Wilbur Wright expresses himself as being well pleased, not only with this new machine (very likely the one we pictured on p. 6) but he seemed also *exceedingly* well pleased with the management of his young pupil.

An old gentleman of Springfield said, as he witnessed the spectacle, "I have seen a horse fly, but I never before expected to see a man fly."

At one point on the route the aviator dropped a note where one of the spectators got it, saying, "Machine is working all right. Will make the trip O. K."

Divers accidents happened along the route to people who were so crazy at the sight of the flying-machine that they forgot every thing else. A little girl was run over, and a boy fell from the top of a box car; and

a man fell and sprained his shoulder in trying to reach the roof of his house by an attic stairway.

At his elevation of something like 2000 feet Mr. Brookins caught sight of the city of Springfield when 44 miles away. He started from Chicago at 9:25, and reached Springfield in 7 hours and 9 minutes. He was in the air 5 hours and 45 minutes, and at one time made 88 miles without descending. In all respects he has broken all previous records.

After the above was in type the following came from our "long-time" friend, the editor of the *American Bee Journal*:

It may interest A. I. R. to know that I saw and touched the identical aeroplane that Brookins went on from Chicago to Springfield. A fellow by name of Hoxie flew there yesterday, using the same machine. It worked fine. There were probably more people at the fair yesterday, *looking up to heaven*, than ever before at that place!

Chicago, Ill., Oct. 6.

GEO. W. YORK.

## Poultry Department

By A. I. ROOT

### SELECTING EGGS THAT WILL PRODUCE PULLETS INSTEAD OF ROOSTERS, ETC.

Langstroth told us, years ago, that no colony of bees could prosper unless there were daily accessions of young workers—young blood, for instance—for that is what we must have. Well, I believe all our successful egg-farms or egg-farmers, perhaps I should say, declare there must be a lot of pullets coming on every year to take the place of the old hens; and I think it has been estimated that, if you want 250 pullets every year, you must set about 1000 eggs. As a rule it takes two eggs to make a chicken. Again, only half the chickens will be pullets. The males must be disposed of for broilers or roasters. Well, we used to be told that certain eggs, say the long ones, would produce roosters, and the round eggs pullets. But this has been exploded by our experiment stations, and, so far as I know, every other test has been exploded. No man alive can tell whether an egg will produce a pullet or a rooster. But now comes in a new invention or discovery, that is, if it turns out true. We grant in the outset that no one can *pick out* eggs that will produce pullets; but one of our subscribers thinks he has hit on a plan whereby we can produce eggs to order that will make *mostly* pullets. Listen to him:

I will give you something I think is new in the chicken business, at least. Three of us neighbors here have tested it, and found it to come true. Get a full-blooded White Wyandotte rooster and full-blooded Plymouth Rock hens. Put them together; set the eggs from those hens and you will raise mostly black chicks, and all the black chicks will be pullets, or at least it turned out so with our neighbors and us. They may not always all turn out pullets, but they did with us—not a rooster among them, and they made large hens and good layers.

Gate, Wash., May 27.

J. S. BLAIR.

After receiving the above letter I wrote back I thought he must be mistaken; and



he in his reply explained a little more fully. The idea seems to be this: With such a cross of two breeds as he mentions, more of the chickens will take after their mothers than after their father; and those that take after their mother in color will also follow the mother in sex. Now, although I have read thirty or forty poultry journals for two or three years past, I have never seen any thing before touching on this point; and I would not have very much confidence in it even now—not enough to submit it in print—were it not for something I am going to tell you.

About a year ago, as you know, I purchased fifteen Buttercup eggs, and raised to maturity seven chicks. Three pullets and two roosters I took down to Florida, and two Buttercup roosters were left here in Medina. As these were considered valuable, and I had no Buttercup pullets, but forty or fifty Leghorn hens, I thought I would raise a lot of half-bloods and possibly get a few pullets from the lot that at least had strong marks of the Buttercups. A neighbor who has several hundred fowls remarked that he would help me out in my experiments if I would let him have some Buttercup eggs at market price. He set over a hundred of these eggs from the White Leghorn mothers mated to full-blood Buttercup roosters. Buttercup males are red, with black wings, and neck feathers. They very much resemble Rhode Island Reds. Well, we both expected to get at least half the chicks with Buttercup markings. The full-blood Buttercup hens look very much like the Golden-spangled Hamburgs. Well, now for the outcome. Neither he nor I have a pullet that resembles my Buttercup hens in Florida. We have quite a few white ones that have yellow or cream-colored feathers; but the greater part of, say, 100 chicks are white, like their white mothers; and last, and most important of all, they are not only the *color* of their mothers, but I should say that 70 or 80 per cent *are pullets*. These cross-bred eggs were all set under hens.\* Perhaps some of the old poultry readers can explain this. You have the facts before you as nearly as I can give them; but I confess I can not understand why making a cross of this kind should result in having the greater part of the chicks take after the mothers, not only in color and looks, but *also* in sex.

Now, then, have friend B. and myself blundered on a discovery that will enable poultrymen to raise a great lot of pullets in proportion to the males where pullets, and not roosters, are what is wanted?

\*Since the above was in type the neighbor mentioned above has given me a further fact. He says that some time ago he placed a White Wyandotte rooster with some full-blooded Plymouth Rock hens exactly as friend Blair mentions. He says the resulting chicks were really black, and made black hens—not a color of the Barred Rocks, remember, but *black*. I did notice that friend Blair says black chicks, but I supposed he meant dark-colored ones like their mothers. Now, this is indeed strange—black chicks resulting when neither parent was black, and when the father was pure white. He says, too, these black hens are excellent layers.

#### SOILED AND DISCOLORED EGGS, ETC.

I sent you a letter some time ago setting forth what I found to be the practice of the best poultrymen here in regard to housing their chickens. As a new comer I was anxious to get the best as well as cheapest shelter for my flocks on my homestead, and I carefully looked into this matter. Mr. A. I. Root wrote me to know what was done about soiled eggs, if roofless houses were used. May I report that the soil does not soil them? This sand does not make mud. Mr. Stevens, who is regularly in the egg-producing business, washes what few dirty eggs he gets, and lets them dry over night before shipping. The others send theirs to market just as they gather them, and do not have any complaints. Indeed, this market is glad to get almost any thing in the way of an egg.

Denaud, Fla., Sept. 1.

FRANK M. BALDWIN.

Friend B., if you wish to produce "gilt-edged" eggs for supplying fastidious customers—those who are willing to pay an extra price for strictly fresh eggs, and eggs handsome to look at, they must not be exposed to rain, even if the eggs are laid in the sand. If you will remove an egg from a nice clean nest shortly after it is laid, you will find it has a sort of bloom on it like that on a plum; and even picking it up with the fingers, if they are a little sweaty, will injure this bloom more or less; and I have for some time made it a point to wash my fingers thoroughly with soap and water before I gather the eggs; and, no matter how clean the nests are when provided with clean straw or Florida sand, the least bit of rain spoils this bloom as an indication of freshness. A newly laid egg that has not been handled by dirty fingers is to me almost as handsome as a flower; and there are lots of people who are willing to pay an extra price for fancy eggs or fancy fruit. Now, if you do not like to cater to these fastidious people, let your eggs stay out in the rain, and dump them in all together. By the way, I have never found any method of washing eggs that did not destroy the bloom more or less; and if you are saving up eggs for *hatching* I am sure it will pay to take pains as I have indicated in the above. I appeal to our veteran poultrymen who are getting from five to ten cents above the market price for eggs if I am not right about it; notwithstanding, where your market will *not* pay any thing extra for fancy eggs the day they are laid, or the next day, of course it will not pay to go to all this fuss.

#### SWEET CLOVER CROWDING OUT CANADA THISTLES.

We clip the following from the *Rural New-Yorker* of a recent date. Our readers will notice that it is from the same man whose illustration appears on p. 568.

#### ANOTHER SWEET-CLOVER STORY.

During the month of June, 1906, I purchased 10 lbs. of white sweet clover (*Melilotus alba*) seed and sowed a patch of about an acre, which was infested with Canada thistles; however, it happened a drouth followed the sowing, hence there was a very thin stand. The seed was simply sprinkled over the sod and thistles, and no cultivating previously. The next year it was mown for hay just before it was in bloom, and the few years following it was allowed to stand and reseed itself until now, 1910, it is a thick mass, almost impenetrable, and the average height is five feet six inches to seven feet. And the mar-

velous thing about it is, the clover grew so fast and so thickly that the Canada thistles were choked, and at present there are very few to be seen except along the edges of the patch. As sweet clover belongs to the legume family, it has gathered nitrogen from the air and stored it in the numerous nodules, borne on the roots, to be used as an enricher of the soil.

To sum up, I have killed two birds with one stone, viz., choked out the thistles and at the same time enriched the land; and last, but not least, it has furnished pasture for the bees while in bloom. In raising sweet clover as a forage crop and for hay, prepare the ground as for alfalfa, and sow in August quite thickly, possibly about 25 lbs. to the acre. If a good stand is secured the next spring, the plants will stool; and if it stands thick, as it should for hay, the stems will not be coarse, and the cattle and horses will eat it up clean. However, at first the horses and cows refuse to eat it, but soon get used to it, and afterward eat it greedily. It should be mowed for hay just before it blooms, as the stalk gets too woody, and cattle will not eat it. It is a great plant for green manuring, and when turned under produces great crops of potatoes and corn. As a weed I do not think it is any worse than the other clovers, for it can easily be got rid of by plowing under or cutting the stalk while in bloom.

Sweet clover compared with alfalfa or other clover, I think, stands second to alfalfa and above the other clovers entirely. If mown for hay before the blossoms open, it will sprout, and stock can be pastured until fall. As a weed-eradicator, soil-enricher, honey-plant, and forage-plant, I think it has very few equals when rightly handled. Almost any soil will grow sweet clover. The hardest clay and the most barren-looking soil may grow it, and drouth will seldom affect it. I think if the farmers learn to know the value of sweet clover they will no longer regard it as a weed; and another thing, sweet clover might just as well be grown in waste places and along fence rows as weeds, as it is very valuable for the bees for the honey it yields, so bee-keepers take notice. In this article I have given my experience with sweet clover. It came to me as a new plant, and I have tried to find the bad qualities as well as the good, but they are all good in my estimation.

Lancaster Co., Pa.

E. S. HACKER.

I confess that the above is a surprise; but come to think of it I can readily understand that in poor soil where Canada thistles would not make a very luxuriant growth, sweet clover, sending its roots down and its tops away up, might choke even the Canada thistles; and it seems to me friend Hacker has not only succeeded in killing two birds with one stone but that he has killed *several* birds.

#### SELLING SWEET-CLOVER SEED TO HIS NEIGHBORS, ETC.

Those who have read our sweet-clover book will recall that Frank Coverdale is growing sweet-clover seed on a scale perhaps as extensive as almost anybody else; and the following letters tell of his success:

We have just bound with a binder 30 acres of white sweet clover which is the right kind for farmers to sow. We have four big stacks, and it is full of seed. It is fine business harvesting this seed, as it handles so nicely. I wish I could toss you a bundle. In three weeks or so we will hull it out clean. This clover certainly makes the very best hog pasture of any of the clovers. I have tried alfalfa, alsike, and red clover, but *alba* is by far the best of all. What a money-maker the clover would be if farmers could be taught how to sow and use for hog pasture! I have run over 100 head on my fields, and every one who sees them is enthused with results; but it is hard for nearly all to get over the idea that it is not a weed. Some are ordering seed. One field where hogs ate it down to the ground, the hogs were taken off Aug. 15, and it stands now 10 inches high. This I will cut for hay in October. It is a fine field.

*Melilotus officinalis* begins to bloom May 25, and makes a very strong growth during May. This is

the seed that I am so anxious to get and sow in corn at the last plowing, to be plowed under the following May. The white is not good for this purpose; but in a small way this large yellow has shown very flattering results. This variety doesn't bloom until the second year.

Delmar, Iowa, Sept. 3.

FRANK COVERDALE.

We thrashed those stacks to-day, and the seed is selling rapidly to my neighbors, they taking from two to three bushels each. What do you think of that? and it is over half gone at \$10.00 a bushel. There is going to be a liberal market for *Melilotus alba* the coming winter, especially if I write for a few of the leading agricultural papers, as the editors are asking me to do.

Delmar, Iowa, Sept. 13.

FRANK COVERDALE.

Friend C. refers in the second letter to his writings for the agricultural papers. These writings, no doubt, *do* advertise the seed; but in a matter of so much importance to the general farming community all over our land, we can readily excuse him, and the journals that accept his articles for such "free advertising."

#### SEED CORN—IF NOT GATHERED, GET ABOUT IT AT ONCE.

Farmers' Bulletin, No. 415, on seed corn, is a most valuable pamphlet of 12 pages, just out. You can get it by applying to the Secretary of Agriculture, Washington, D. C. There are also ten other bulletins on growing corn, any or all of which will be sent free of charge. This bulletin states that the farmer could well afford to pay even five dollars a bushel for good seed corn instead of planting the kind of seed he ordinarily uses. But a better way, rather than to *buy* seed, is to grow your own. This is true, because the corn that succeeds best in one locality may not succeed at all in another. Use seed corn grown on your own farm, or, at least, in your own neighborhood. The wisdom of this has been proved over and over. Make your selection before the corn is cut; then put the ears in a dry place without their touching each other. Keep your corn in a dry place until planting-time. Millions of dollars are wasted and thrown away, in money and labor, by the folly of planting poor or indifferent seed. And be sure to save *enough* so that you can plant over if necessary. By all means get these bulletins and study them; but, most important of all, select your own seed corn, if it is not already done, this very minute, and put it in a dry place. You will make bigger wages in looking after your seed corn right now than in any thing else you can do.

#### SWEET CLOVER RECLAIMING LAND GIVEN UP TO THE DOMINATION OF CANADA THISTLE.

The two articles in this number in regard to sweet clover and Canada thistles open up an entirely new field, not only to the bee-keeper but to the general farmer. I am told there are vast tracts of land in Canada deemed almost useless because of the Canada thistle. Now, if sweet clover will crowd out these thistles and at the same time furnish more fertility, and better fertility than any other legume, it is going to be a boon to the whole of America (if not to other parts of the world) that nobody yet dreams of. Will our different experiment stations take hold of this and demonstrate how *much* is really possible along this line?